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ALBANY
MEDICAL ANNALS

Journal of the Alumni Association of the
Albany Medical College

VOLUME XXXVI

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ALBANY MEDICAL ANNALS

Original Communications

INTRODUCTORY LECTURE.

ALBANY MEDICAL COLLEGE, TUESDAY, SEPTEMBER 22, 1914.

BY JOSEPH D. CRAIG, M. D.,

Toward the close of the eighteenth century there opened, on Little Windmill Street, London, an institution for instruction in medicine which is believed to be the first medical school among English speaking people. This forerunner of the medical college offered three courses of lectures to aspiring youth, one in medicine, one in surgery, and one in obstetrics. Its presiding genius was the great John Hunter. This was the same original investigator whose name has been perpetuated in the Hunterian chancre, and whose researches on the first and fifth nerves, and the lymphatic system, while primitive, are classics in medical literature. Hunter introduced to medical science the inductive method of research as his most momentous contribution. Hunter was the first eminent qualified medical laboratory English investigator. This peerless inquirer into scientific truth delivered the introductory lecture at the opening of this first historic English medical college.

Since Hunter's time practically all formulated and systematized medical instruction which can lay claim to a venerable age, and is of the English type, has opened its courses with an introductory lecture. Such has been the common usage also in this college.

In conformity with this established custom I have the privilege and the honor, on this epoch making day in the history of the Albany Medical College, of addressing you at this opening hour of the eighty-fourth session of this time-honored institution; an institution highly esteemed by the citizens of this ancient city and revered by hundreds of her loyal and devoted graduates.

It will not be amiss for a few minutes in the beginning, to consider some evidences of the tendency of this college to place itself from the beginning among the colleges of progressive medical ideas.

This day marks the beginning of the third epoch in the history of the Albany Medical College. The first epoch was concerned with the organization and development of the institution under the guidance of the Anatomist Armsby and the Surgeon March. It was a proprietary college in the meritorious meaning of that word as were all medical colleges of that time.

Of recent years the term "proprietary medical college" has been a much misunderstood term. It has become a contemptuous expression, spoken with frowning forehead and sneering lips.

In justice to the fathers of organized medical instruction we should give deliberate consideration however to our construction of the authentic meaning of this phrase before we draw the final indictment. The term must be viewed from the historical as well as in its perverted significance.

Early medical training consisted in desultory bedside teaching by practitioners of medicine at a time when medical thought awaited the illuminating researches of Pasteur and Koch and medical treatment was for the most part empirical and unscientific. Any individual with or without adequate preliminary training, the dilettante from his book, the farmer from his plow, the engineer from his throttle, the fakir from his spurious wares, even the densely ignorant, the honorable and dishonorable alike could in a few months become an accredited practitioner. Groups of public spirited physicians and surgeons, here and there in the larger centers of population, recognizing the baneful effects of such a system of education gathered together for the consideration of some adequate means for competent instruction in medical science, and for the adoption of some measure of protection of the uninformed public. Without State support or regulation, without public financial assistance of consequence or more than the occasional grant of land, these early pioneers in medical education organized the old time medical colleges. Their object was primarily a more scientific training for candidates for medical licensure. They organized hospitals and clinics and furnished hospital training for candidates for such medical licensure. They sought and eventually obtained legislative action restraining the unprepared from entering the profession. In the fullness of time they provided laboratories for practical instruction. They were progressive and kept pace with the tremendous advance in the science of the healing art. They were public spirited on the side of preventive medicine. They organized the best institutional system of instruction possible considering their opportunities, the state of the science and the times in which they flourished. The distribution of fees has been always subordinated to the higher obligation. Proprietary infers commercialism. These early educators were in no sense commercial. How unjust to apply such a designation to the labors of the men who were leaders of public thought in all medical endeavors in their time. There came a time when the growth of the medical sciences became so vast, the opportunities for State control so ample, and the necessities so great, that the old system outgrew its usefulness. The college on a university basis is taking the place of the old time medical school. Let us be fair and just. It is as unfair and unjust to speak contemptuously of the old method now passing away as it is to refer to the advancing movement of re-organization in all our medical colleges as commercialism on the part of the large endowed medical universities or as the formation of a Carnegie medical educational trust.

The Albany Medical College had been during the first epoch as well as at all subsequent periods, a college of fine reputation and reputed scholarship. This first epoch closed about the year 1874.

The second epoch is associated with the unselfish labors and devoted sacrifices of that faculty which is now passing from active labor after forty years of valiant service. The details of such service are matters of general knowledge and need no recapitulation. During the second epoch the school has been gradually passing from the so called proprietary type to the full-time salaried instructors' class of teaching institutions; from the didactic lecture to the laboratory.

The third epoch opens to-day. The college starts this new era with a legacy of historical treasures; educational, personal, and civic.

It has a reputation of which its graduates and friends may be proud. It is placed in class A by the organized medical profession of the United States, grouped under the title of the American Medical Association. You will recall that this association defines class A as a college which is "acceptable" in most departments of administration, instruction and equipment, but "which needs improvement in some respects." Moreover, this institution has been accepted as a "College" not a school by the same association.

What the future history of the institution is to be rests during this third period with the able, enthusiastic younger professors who begin their unselfish labors with this session and depends upon the devoted support of the loyal alumni and the generous financial assistance of the citizens of Albany.

The earliest official publication of this college at my disposal is a four-page leaflet issued to the students of the college during the year 1862 by Dr. Quackenbush, then Registrar.

The catalogue of this year, an additional publication, contained sixteen pages, eleven of which were made up of lists of students and graduates. But five pages explained the organization of the school. There were at that time seven members of the faculty and no adjunct faculty. The school occupied the present building. The course ran for sixteen weeks, beginning the first Tuesday of September. Two such courses were required for graduation. The fee for each course was $65 or for both courses $110. All of the sciences of medicine—anatomical, physiological, chemical, surgical, medical, and obstetrical were taught in the sixteen weeks. The time seemed ample for instruction in the then existing knowledge of the science. There were no Regents in those days demanding, and no American Medical Association to recommend competent preliminary education and subsequent instruction. The four-page circular of the year 1862 gives the names of sixty-seven students in the College in 1861. It was the announcement immediately preceding the civil war, as a number of the members of that class served in that sanguinary conflict. Among the members of that class I notice the names of John S. Delavan, for many years a noted practitioner in Albany; Henry R. Haskins, afterwards demonstrator and professor of anatomy in the college for many years; Alfred B. Huested, now one of the oldest members of the teaching staff of the School of Pharmacy, and Albert Vander Veer of Root, N. Y., who this year finished forty years of active service in this institution.

In 1874 the faculty had been increased to nine members, with three in addition forming a rudimentary adjunct faculty. The notable addition to the faculty was the Professor of Pathology. There were 121 students and a graduating class of forty-seven. This noteworthy paragraph appears in the catalogue under "Methods of Instruction." "The aim of the faculty is to make its courses practical, useful, and scientific. It does this by combining with didactic lectures, clinical lectures, recitations, practical work in the laboratory and dissecting room, and by the examinations and diagnoses by students of cases assigned to them and by reports and criticisms of the same by the class and the professors." The "aim" of the faculty in that year seems to have been an accurate one and to have hit the mark. The proclamation of the faculty of 1874 expressed in terse terms a desire of accomplishment which is worthy of a place on the title page of the catalogue of 1914 as a declaration of the purpose of the faculty of to-day.

The catalogue of 1884 shows a faculty of fifteen with an adjunct faculty of two, and an Emeritus list of two. This faculty is of interest to me as it was in this year that I first entered as a student in this college. Of that faculty seven are dead, two have retired, four have been added to the Emeritus list, and two are still active. The course by this time had been extended to twenty-four weeks, the fees raised and the three year graded course begun. Bacteriology was then in its infancy, but pathology was a well organized course. Otherwise the courses were practically outlined as they are to-day. The only difference is in the fact that progress has been written into all departments.

In 1886 the faculty of thirteen began to appoint assistants, at that time eight in number.

In 1894, with practically the same faculty, the adjunct faculty numbered thirty-one. Preliminary examinations were now required by the Regents. The course had been extended to thirty weeks.

In 1899 the catalogue assumed its present form.

In 1904 the faculty had increased to fifteen and the adjunct staff to 57.

In 1914 the faculty had been enlarged to eighteen and the adjunct faculty increased to eighty-five.

This cursory review of our college publications has been made for the purpose of emphasizing the fact, expressed and implied, that the college has always shown a progressive tendency. The dominating principle of action has been the presentation of medical science to students of medicine in the latest and most effective manner. The education of students for practical service among the people has been the actuating motive of the faculty. Up to this date the graduates of this institution have ranked high as practitioners of medicine, and some have attained distinction as experimental scientists. As an illustration it can be truthfully said that most of the able young specialists in medicine in this section of the State have received their preliminary medical education in this institution, while the rank and file of the profession educated in this college are doing effective service for the people.

The college never has and does not now make pretension to post-graduate education for special service. It never has offered to prepare men otherwise than for the general practice of medicine and surgery. Its boast has always been practical education for the service of the people.

The year 1874 has been chosen as a convenient dividing year between the first and second periods of the history of the college for the reason that the conditions then existing were in many respects similar to those pertaining at the present time. About that date the original members of the faculty had grown old, and perhaps weary of service and were prepared to retire, or had been removed by death. Medical science had perhaps outgrown their methods or the scientific correlation of their knowledge. Progressive young men with modern ideas stood ready to fill their places. Changes were made. Courses were brought in line with modern thought. Young Vander Veer, Ward, Merrill, Boyd, and Tucker took the laboring oars and the college ship was launched on prosperous seas for a voyage of forty years. The results of their labor have been written indelibly in the history of the college and enshrined in the hearts of hundreds of its alumni.

Recently history has been repeating itself. The last forty years has seen the didactic lecture give way to the laboratory and the return in compromise to the didactic lecture. Neither seems to be able to do fully effective work without the other.

The clinical lecture has been transferred from the pit to the hospital.

It is now more important that the student be trained in the use of the tools of the craft and in the application of the human senses to the art than that he become an encyclopedia of all medical learning. The teachers of medical science must be now full-time instructors giving their whole energies to the work in hand. Those who have charge of the primary subjects of anatomy, physiology, chemistry, and bacteriology are conceded to be of necessity such full-time men. But you notice the tendency. One of the leading institutions of learning in this country is about to appoint full-time teachers in the clinical departments of medicine and surgery. The special departments of our science must also be eventually so directed. So is instruction in medical science being reduced to a university basis. Bacteriology which in my day as a student was taught in four lectures has grown to a commanding place in the curriculum, and pathology which has progressed as a corollary to the growth of bacteriology, demands special equipment for its effective teaching. The chemical laboratory is being gradually absorbed by the physiological laboratory which is also taking over and enlarging upon didactic physiology. So the necessities of instruction are being changed by the demands of all other departments of medical science.

In view of all this recent demand for the introduction of modern methods of instruction it is but natural that this college, with its previous history of years of progress, should take cognizance of the tendencies of the times. There has been but little difference of opinion as to the end to be accomplished. The discussion has turned upon the means of its accomplishment and the time limits within which such advancement should be made.

Looking towards the perpetuation and success of this venerable institution of learning, many changes have taken place in the teaching staff since the close of the college last May. The young men of forty years ago who still survive and who with high ideals assumed the responsibility of college management at that time have for the most part passed to the emeritus class and rest from their honorable and arduous labors. Younger men, progressive, enthusiastic, skilled, experienced in teaching for the most part, have assumed the work of the elders who have retired. It is to be assumed that the college and the profession can look confidently and hopefully to them as teachers and as leaders in progressive medical thought as they did four decades ago to the then younger men.

It is evident as you scan the list, which it would be impracticable to here make recital of in detail, that the college is now in preparation for its next successful voyage and that the ship has not been fully manned.

Important places on the faculty are now vacant, waiting for the men to fill them. Such men will eventually be found either among the adjunct faculty or from afar. You will notice that some of the faculty places have been filled. That thoroughly experienced teacher and able neurologist, Prof. La Salle Archambault, who is none the less welcome because he is a graduate of our college, becomes Professor of Neurology in the place of Dr. Henry Hun, resigned on his own volition for the reason that he had reached the Osler age for retirement from active teaching. Prof. Ellis Kellert also a graduate of the Albany Medical College; skilled bacteriologist and pathologist with ample experience in large research laboratories, becomes Professor of Bacteriology and Pathology in place of Professor Harry S. Bernstein resigned to become Pathologist to the State Board of Health of Rhode Island. The vacancies in the chairs of Medicine caused by the retirement of the peerless Ward, and of Surgery by the retirement of the loved Vander Veer, and of Obstetrics by the retirement of the able Boyd and of Ophthalmology by the retirement of the skilled Merrill, and of Physiology by the resignation of the scholarly Gordinier, and of Materia Medica by the resignation of the scientific Van Rensselaer, have not yet been filled. However, while awaiting for one reason or another, the permanent occupancy of these chairs, by authoritative and duly constituted heads of departments, we must not for one moment suppose that the necessities of the student body are to be overlooked, and that competent instruction will not be afforded in these several departments. Professors experienced in teaching. of ripened practical training and of long association with the college will assume the grave responsibility of directing these several departments. Successful issue of the year's instruction cannot therefore, be doubted. Professors MacFarlane and Neuman will stand at the head of the department of medicine, Professors Morrow and E. A. Vander Veer at the head of the department of surgery, Professors Lipes and Lochner at the head of the department of obstetrics, while Dr. Jerome Meyers will guide the students through the mysteries of materia medica, Mr. Arthur Kundson who will direct the experiments in the physiological and pharmaceological laboratories; and Dr. Arthur Krida are the new comers among us. Dr. Krida supplemented his college degree in this institution by a most creditable, successful, competitive examination against all comers for the interneship of one of the largest New York hospitals, and has since had further training in the special activities of the profession. He will lecture on physiology in collaboration with the practical laboratory courses in the department. We believe him to be an able teacher, thoroughly in earnest in his work and are assured of satisfactory results to come from his addition to the teaching force.

Some changes in the list of full-time instructors are to be noted. It so happened this year that all the vacancies among this class of instructors have been filled by skilled, trained, loyal, competent graduates of this college. They are Dr. Elmer Harrison Ormsby of the class of 1913, who will assist the chair of Anatomy, Dr. Wardner Daniel Ayers, of the class of 1910, Dr. Morris Bryan Beecroft of the class of 1913, and Dr. George Victor Gensmer of the class of 1913, who will assist the chair of Bacteriology and Pathology.

It would be impossible to recount within the limits of this lecture all the changes that have been made in the adjunct staff. The current catalogue will make clear all these changes. There have been only a few withdrawals, many promotions, some additions, and frequent changes in title among the members of this most important adjunct to the medical instruction in the college. The success of the various courses depends in a great measure upon the faithfulness, ability, and co-operation of these younger men. The college could not exist and do effective work without them. To their loyalty and immeasurable assistance during these days of reorganization and rehabilitation the colleges owes this expression of grateful appreciation and formal acknowledgment.

There is a tendency in some of the Western States to the organization of State universities, under State auspices and control and supported by State money. All branches of learning are taught, including medicine, with the possible exception of theology. The principle underlying the organization of such State institutions has many attractive features. Such an educational scheme is worthy of the serious consideration of the legislative body and the Regents of this State. One such university seems to answer all the requirements of the States in which they are founded, but more than one would be essential in the State of New York. They are models for all other schools or colleges. With ample State support, they are a power in the educational world. Such State support has made in large measure the German schools the mecca of the medical world. The State of New York offers inadequate State aid to established schools of the professional type, supervising education, only in primary, secondary, and higher grade and training teachers in its normal schools, but in no sense maintaining a university organization for instruction in all branches of learning. The seat of State government, with its vast State libraries and museum collections, ethnological, geological, and anatomical at hand, is the natural seat of one such university in this State. The medical department of such a university, with its amply compensated research workers, would find a congenial atmosphere in this city. Some day we trust, as I think, the great State of New York, with its vast resources, will consider its opportunity and perform its duty. In the meantime, there is a place for a medical college in this section of the State. Such a college should receive such State and local financial support as to fit it for the nucleus of the medical department of more than a nominal, an actual teaching, university. That place the Albany Medical College proposes to fill. On this opening day of the beginning of the third epoch in its history the college starts to fulfill its destiny.

Co-operation is the modern ruling principle of all successful endeavor. Therefore, co-operation must be the working force which must be utilized in the upbuilding of this institution.

There must be the eventual co-operation of the State in aiding in the support of its higher institutions of learning, particularly its non-sectarian professional schools.

There must be co-operation on the part of the alumni and student body, both classes of which must be patient and impersonal during the expression of opinion, confident that the trustees and faculty will do the wisest thing under various and sometimes adverse circumstances, fair in judgment of the sincerity of motives, hopeful that the institution will continue to flourish in a prosperous condition and believing that all the resources of the institution, financial and educational, will be fully utilized.

There must be co-operation on the part of the public generally and as expressed in its Chamber of Commerce and other civic bodies. They must recognize that their college, so long an honorable asset of the city, has passed from the proprietary stage to the university basis, from support from student's fees to dependence on income from endowment. Moral support is welcome, good-will is pleasing, but financial assistance is imperative.

The college plans for a modern laboratory building have been completed and approved. The site has been generously donated by the city. The college must have these greater laboratory facilities in response to the demands of modern medical education. The college has place for a full quota of full-time medical professors and other necessary assistant instructors, some of these places have been filled, others await the advent of the competent occupant, all must be paid adequate compensation to insure the continued services of the higher class of men. They are expected to be teachers first, and researchers afterwards. The college is well equipped for teaching purposes. The increase in its facilities for research is worthy of serious consideration. The public must recognize that modern medical education is the most expensive of all types of higher education. The citizens of this city must, and I have no doubt will, provide such further endowments as may be necessary to maintain the reputation and existence of its medical school.

There must be co-operation on the part of the trustees and faculty of this institution. It would be impossible to enter upon even a suggestion of all the various obligations which rest upon these two bodies in the successful administration of the college. But I should like to briefly mention a few of the perhaps more important movements which the trustees and faculty have up to this time inaugurated in behalf of the school. They are a part of the co-operative plan. In the first place the faculty has expressed its willingness to enter upon any movement for eventual consolidation with other institutions which are a part of the present confederated university, which after due consideration, may seem to be wise and to the mutual benefit of all concerned.

The trustees and faculty have also adopted all the requirements demanded by the State for a registered college and recommended by the general medical profession of the United States as essential to standing in Class A of the American Medical Association's classification of medical colleges. The faculty has in the years gone by provided competent medical instruction to medical students in preparation for a career in general medicine and surgery. The faculty proposes to continue to provide such instruction. Whenever a deficiency is discovered it is proposed to make good the deficit just as far as opportunity offers or means permit.

The faculty has recognized and acknowledged that its standards of instruction in some respects has not been comparable with those of other first-class colleges. The remedy is now in process of application. Some of the young gentlemen returning to their studies to-day may be willing to offer themselves as evidence of the advance in standard, and I think it is now generally recognized among the student body that the standard has " gone up." The effectiveness of the teaching in our American medical colleges is authoritatively determined by the results of the examinations of the students of the various colleges before the State boards of medical examiners. This college has been given a low rating. But let us see if we are as deficient as we have been represented to have been. We acknowledge that our examinations have not been as severe as they should have been nor as hard as they will be. Personally I do not believe that the fault lies with the system of instruction or its adequacy but is entirely due to the fact that the results of examinations have not been reviewed with sufficient severity.

However, let us consider for a few minutes the record of our students before the State Boards of Examiners in comparison with the graduates of other medical colleges. The figures are taken from Table B of the reports of results of examinations as they appear in the *Journal of the American Medical Association* for May and August of this year.

Statistics on the results of medical examinations in the several States will never be fairly comparable until the United States holds a general examination for all medical graduates in all States, on the same day, under the same conditions, with the same questions for all and rates the results obtained by the same examiners with the element of different personalities eliminated as far as possible.

Since writing the above I have read with great interest an editorial in the *Journal of the American Medical Association* for September 12, 1914. This article deplores the present methods of examinations and unequal results, resulting, therefrom, in the several States and advances the súggestion that some means should be found for a general examination under National government control. The article concludes with these words:

" It is surely not to be imagined that so unfortunate an anomaly as our present chaotic system of registration is to remain an insoluble problem."

As it is now, I think a consideration of the following figures will show that in some States the question papers reflect the personal opinions of individuals or reveal the untrained methods of those without wide experience in teaching; that in some States the papers are rated with much greater critical consideration than in others, severe and technical in one and weak and lax in another; that repeaters at examinations are permitted to appear and hold down an otherwise creditable record; that different personalities examining on the same subject in different States cannot be eliminated and vitiate the value of the statistics and that graduates of colleges in States which are none too severe in their examinations, hold a fictitious advantage over the graduates of colleges of States in which the rulings are severe.

The following tables express the results of the examinations of graduates from 1909 to 1913—repeaters and all—examined during 1913. It would be obviously impossible to make comparison through the whole table so a number of the more prominent institutions in the more important States, having a reasonable number of graduates examined in the home State as well as in the State of New York are chosen for the purpose. They are:

Yale University, in the State of Connecticut; George Washington University, in the District of Columbia; Rush Medical College, in the State of Illinois; Johns Hopkins University, in the State of Maryland; Harvard Medical School, in the State of Massachusetts; Albany Medical College, in the State of New York; Syracuse University, in the State of New York; Long Island College Hospital, in the State of New York; University of Buffalo, in the State of New York; Western Reserve, in the

State of Ohio; Jefferson Medical College, in the State of Pennsylvania; University of Pennsylvania, in the State of Pennsylvania; Vermont University, in the State of Vermont.

I have purposely omitted comparisons with the colleges in the City of New York for reasons which will be obvious to some of you.

One graduate of Yale University of the small number graduated from that institution failed in Connecticut out of fifteen examined, or 7 per cent. In the State of New York one failed out of nine examined, or 11 per cent. In all other States out of two examined none failed.

No graduate of George Washington University out of twelve examined failed in the District of Columbia, or 0 per cent. In the State of New York one out of three examined failed, or 33 per cent. In all other States none failed.

No graduate of Rush Medical College failed in the State of Illinois, or 0 per cent. In the State of New York one out of two examined failed, or 50 per cent. In all other States none failed.

One graduate of the Johns Hopkins University out of twenty-eight examined in the State of Maryland failed, or 4 per cent. Yet the graduates of this institution, when examined in the State of New York, failed five out of twenty-two examined, or 24 per cent. In all other States none failed.

Nine graduates of Harvard Medical School out of seventy-eight examined failed in Massachusetts, or 11 per cent. In the State of New York out of six examined two failed, or 33 per cent. In all other States none failed.

Twenty-one graduates of the Albany Medical College out of sixty-two examined in the State of New York failed, or 33 per cent. In all other States none failed.

Six graduates of Syracuse University out of thirty-one examined in the State of New York failed, or 25 per cent. In all other States none failed.

Twenty-nine graduates of the Long Island College Hospital out of ninety-six examined failed in the State of New York, or 30 per cent. Thirty-three per cent. failed in Connecticut but in all other States none failed.

Twelve graduates of the University of Buffalo out of forty-seven examined failed in the State of New York, or 25 per cent. In all other States none failed.

None out of twenty-seven graduates of Western Reserve failed in the State of Ohio, or 0 per cent. One examined in the State of New York passed, or 100 per cent. In all other States none failed.

None out of nineteen graduates of the University of Vermont failed in the State of Vermont, or 0 per cent. Eight out of eight examined in Connecticut failed, or 100 per cent. Four out of seven examined in the State of New York failed, or 50 per cent.

It thus appears that in the home States:

One out of fifteen examined from Yale University in Connecticut failed, or 7 per cent.

None out of twelve examined from George Washington University in the District of Columbia failed, or 0 per cent.

None out of seventy-four examined from Rush Medical College failed in Illinois, or 0 per cent.

One out of twenty-eight examined from Johns Hopkins University in Maryland failed, or 4 per cent.

Nine out of seventy-eight examined from Harvard University in Massachusetts failed, or 11 per cent.

None out of twenty-seven examined from Western Reserve in Ohio failed, or 0 per cent.

None out of nineteen examined from Vermont University in Vermont failed, or 0 per cent.

Yet when the graduates from these institutions come into the State of New York for examination they fail in much larger proportion.

The graduates of Yale University	failed 11%
The graduates of George Washington University	failed 33%
The graduates of Rush Medical College	failed 50%
The graduates of Johns Hopkins University	failed 24%
The graduates of Harvard University	failed 33%
The graduates of Western Reserve	failed 0%
The graduates of Vermont University	failed 50%

You see, therefore, how unfair to the colleges in this State are comparative statistics, and how much more creditable has been the work of the college than has been made to appear. An increase in our examination standards will undoubtedly place the college on a par in examination results with a large proportion of the colleges in the country.

I have purposely omitted in the above statistics comparison with the Jefferson Medical College and the University of Pennsylvania in the State of Pennsylvania for reasons which will appear later. I wish to consider these institution in a separate section.

The Albany Medical College is recognized in all States of the Union except the States of Colorado, Illinois, Iowa, Kentucky, Minnesota, North Dakota, and South Dakota. Exclusion from these States is shared by the great number of medical colleges in the country and in the State of New York we are in the company of Fordham, Long Island College Hospital, New York Homeopathic Medical College, University and Bellevue Hospital Medical College, and University of Buffalo Medical College. The reason and only reason for non-recognition in these States lies in the fact that two years of college work is required as prerequisite to the study of medicine in the States mentioned.

Of this group of colleges the Albany Medical College, Fordham and Long Island are also denied recognition by the State of Pennsylvania, while New York Homeopathic, University and Bellevue and Buffalo are accepted by that State. Why this distinction is made does not appear.

Seven out of sixty-one graduates of Jefferson Medical College failed in the State of Pennsylvania, or 9 per cent. In the State of New York out of four examined two failed, or 50 per cent. In all other States none failed.

Two out of seventy-one graduates of the University of Pennsylvania in the State of Pennsylvania failed, or 3 per cent. In the State of New York five out of fourteen failed, or 33 per cent. In all other States none failed.

It thus appears that the graduates in medicine in the State of Pennsylvania show no better results in competition with the graduates of the group of colleges mentioned in the examinations in the State of New York, the only State in which the number examined are sufficiently large to permit of comparisons. Yet the State of Pennsylvania refuses recognition to a group of these colleges in this State whose graduates make equally creditable showing with their own.

Let me quote again from the recent editorial in the *Journal of the American Medical Association.*

"It is surely not to be imagined that so unfortunate an anomaly as our present chaotic system of registration is to remain an insoluble problem."

I have a few additional statistics just published by the Chief of the Examination Department of the University of the State of New York, in which you will be interested. They are some of the results of the medical examination held last January. Out of all examined at that time, 1,171, 30 per cent., failed.

6 examined from Yale	20% failed
9 examined from Albany	11% failed
8 examined from Fordham	25% failed
9 examined from Long Island	22% failed
3 examined from N. Y. Homeopathic	50% failed
8 examined from Syracuse	25% failed
9 examined from Bellevue	33% failed
7 examined from Buffalo	67% failed
4 examined from Jefferson	50% failed

The Albany Medical College, then, on the opening day of a new career, has every reason to feel cheered at the prospect of a successful future career. It has the loyal allegiance and good-will of its alumni and the citizens of this city. It has a creditable rating by the American Medical Association and a reputable place on the list of classified American medical colleges. It has a devoted board of trustees and faculty which have provided competent instruction within the limits of their opportunities. It has plans approved and adopted for a new laboratory building. It has a favorable location with large hospital facilities for the teaching of medicine and surgery. It has one effective laboratory building for the teaching of pathology. It has opened places in its faculty for progressive and qualified teachers of medicine. It has recognized its deficiencies. It wants particularly laboratory buildings and endowment. It proposes to make strenuous effort to obtain both.

This college has determined to be progressive in its impulses, capable in its field of instruction, modern in its tendencies to utilize its resources to the fullest extent, worthy of public support, to merit the good-will of its large body of alumni and the educational world. A college with such praiseworthy standards, efficiently sustained, surely cannot perish but will continue its good work in the education of practical medical men for the service of the people.

It has been customary in these opening addresses to give some measure of advice to students as to their conduct and course of study. This year the public consideration of larger and more commanding interests has demanded that these subjects should be relegated to a subordinate place. This only, therefore, can be said. You seek to enter the profession of medicine, which is a most arduous one. Like all occupations in ife it has its advantages and disadvantages, its trials and consolations. It is of all professions an honorable one and demands to be followed by honorable men. The study of the profession is an extremely difficult one, and its successful acquirement will demand the exercise of all your mental resources and physical reserve. If you are well prepared the task is not beyond your abilities. If you succeed in your laudable endeavor and obtain a license for the practice of the art the compensation for your strenuous and unselfish labor as practitioners of the healing art, if not viewed from the commercial angle, will be ample and soul-satisfying.

However imperative the demand on your time and energy as students for a degree, there must be moments of relaxation and amusement, else Jack will become a dull boy. In such moments remember the dignity of the profession and that you are fitting yourselves for a life of devotion to the service of humanity. It is for you, resting in the strength of your own character, to guard yourselves against yielding to the weaknesses and frailties of our common human nature to the extent of permitting relaxation to grow into wasteful dissipation, or amusement into unrestrained license and depraving vice.

I welcome you to this college on this opening day of a new era, a college whose prospects are as bright and fair as any that have gone before. It is a college of honorable history and faithful service to which you come.

Your labors in the good work of upbuilding the institution, together with the co-operation of the public, the trustees and faculty, will be instrumental in perpetuating an institution long in the service of the people and contribute to the development of a modern medical college dedicated to scholarship and the service to humanity.

ADDRESS ON THE SUBJECT OF THE FEEBLE-MINDED WITH SPECIAL REFERENCE TO BORDER-LINE CASES.

Presented at the Fifteenth New York State Conference of Charities and Correction, held at Utica, N. Y., November 17th to 19th, 1914

By ROBERT W. HEBBERD,
Secretary of the State Board of Charities

At the invitation of the committee in charge of this session of the conference, I have, with some diffidence, consented to present to you this afternoon, a short paper on the subject of "The Feeble-minded with Special Reference to Border-line Cases."

It must at the outset be understood that in what I have to present for your consideration, I am speaking for myself only, as neither the State Board of Charities nor the State Commission to Investigate Provision for the Mentally Deficient, has taken any position with relation to certain specific details of the subject about which I propose to address you.

The State Board of Charities.

For nearly half a century the State Board of Charities has been actively interested in the better care of the feeble-minded in this State. During all this period its members and officers have been at the forefront of the movement to provide better and more extended institutional care for the feeble-minded. In considerable part, through the efforts of the Board, such care has been extended and improved. As the Board's reports to the Legislature will show, it has, year by year, persistently and urgently recommended the extension of the State's institutions for the care and training of the feeble-minded. At times the Legislature and the Governor have been responsive to these recommendations, while at other times but little progress has been made.

The establishment in recent years of the "Craig Colony for Epileptics," a very large majority of whom are feeble-minded, and of "Letchworth Village," was largely due to the Board's efforts. As is well known, both of these institutions were named in honor of former Presidents of the Board. This year the Board recommended that the Legislature appropriate the following sums for extending the facilities of the State institutions for the care of the feeble-minded: Syracuse, $11,000; Newark, $195,000; Rome, $157,000; Thiells, $657,000; making a total of $1,020,000.

The plea of "economy," however, strongly urged in a year when a Governor and other State officers were to be chosen, proved more effective than all the arguments that were made for the extension of the facilities of the institutions. The sums granted by the Legislature and the Governor were as follows: Syracuse, nothing; Newark, $1,000; Rome, $150,000; Thiells, $500; making a total of $151,500, a sum less than one-sixth of that recommended by the Board.

Meanwhile the need continues to grow and it does not seem feasible ever to meet it adequately through the ordinary annual budgetary appropriations. The only possible method of doing so appears to be through a bond issue that will provide the means to bring the facilities of the institutions up to date. When that is done, it is possible that the appropriations in the annual budget may, thereafter, be sufficient, as President Stewart of the Board recently pointed out in a letter to the Governor:

"Unless bonds are issued, there appears to be no practicable way of raising the necessary money. The real question is whether the unfortunate wards of the State, including many feeble-minded persons of both sexes, are to be cared for suitably and promptly, or are to be continually neglected by the State. Neglect of the feeble-minded will alone probably cost the State more than the entire cost of the bond issue proposed. There seems also to be much confusion in the public mind as to the actual cost to the State of a bond issue such as has been proposed. If the State actually had the money in bank and used it for construction purposes, it would lose the interest on the moneys. Therefore, the only additional cost of a bond issue will be the interest difference between the earning value of the money to the State and what it costs to raise it on a bond issue. This fact seems to be lost to sight in the partisan consideration of the subject. As the great business corporations, and the local subdivisions of the State, raise moneys for the extension of their facilities through the issue of bonds, there is no good reason why the State itself should not in the same way raise money for these urgently required improvements, particularly as the needs cannot be adequately met in any other way. When the State voted bond issues for canal and highway purposes there was, so far as I can recall, no such criticism of the cost. It has been reserved for the comprehensive effort now being made to provide for the reception and proper housing of the unfortunate wards of the State. Realizing, because of its long familiarity with the subject," President Stewart concludes, " the great and increasing necessity which now exists for additional provision for the care of the feeble-minded, and other classes of the State's wards, the State Board of Charities has for years, and in several of its annual reports to the Legislature, including the last, recommended that bonds be issued for this purpose."

If moneys should thus be voted by the people, the needs of the institutions would not continue to be the annual football game of party politics, as they have been in the past. The goal for them would have been won and they would thereby be removed from the dangers incident to their presence in this annual partisan arena. This would certainly be a great gain.

The State Commission to Investigate Provision for the Mentally Deficient

As a matter of fact I had absolutely nothing to do with the legislation of this year which established the State Commission to Investigate Provision for the Mentally Deficient. It was a great surprise to me when the Governor appointed me to the position of Chairman of the Commission. An examination of the statute shows very clearly that the duties imposed upon the Commission are of an exceedingly simple and business-like character. They are not in themselves " scientific " in their nature, although the Commission may recommend the adoption of more scientific ways of dealing with the question of feeble-mindedness in this State. Had the duties of the Commission been of a scientific character, I would not have had the temerity to accept the responsibility of the office, as I lay no claim to scientific attainments, neither in this nor in any other direction.

The title of the Act shows very clearly the nature of the work assigned to the Commission. Therein it is clearly stated to be a " Commission to Investigate Provision for the Mentally Deficient." The Act provides that it shall be the duty of the Commission to investigate the subject of the public provision for the care, custody, treatment and training of the mentally deficient, including epileptics. The Commission is authorized to issue subpoenas for and to compel the attendance of witnesses and the production of books, papers and other evidence, to administer oaths, and to examine witnesses and papers respecting all matters pertaining to these subjects. It may appoint subcommittees to make inquiry into one or more of the subjects and such subcommittees shall have the same powers of examination as the Commission itself.

The Commission is further authorized to examine and investigate methods and institutions and the results of similar investigations in other states and to visit and conduct hearings for that purpose therein.

So that, speaking generally, it may be assumed that it is the Commission's duty to ascertain as closely as possible the number of the feeble-minded in the State who require care and training, the nature of the present facilities and methods of care and training, and how they should be improved and extended. As by the terms of the Act the Commission must make a "full and final report" to the Legislature by February 15th, 1915, it will be seen at a glance that it could not hope to do anything more than is required by the plain terms of the statute.

Work of the Bureau of Analysis and Investigation

Fortunately for the work of the Commission the State Board of Charities some three years ago, established a "Bureau of Analysis and Investigation" to study the question of the feeble-minded, particularly in this State, and this Bureau has been able to assist the Commission by giving it the benefit of the services of several experienced workers in this field, all of whom had passed a critical civil service examination, calling in some considerable part for a knowledge of this particular subject.

These workers recently concluded a survey of the entire State outside of the city of New York, which while not "intensive" in its nature, showed nearly nine thousand mentally deficient persons unsuitably cared for in almshouses or in their own homes. A survey of New York City is now being taken and will, doubtless, show a census fully as great in number. This information was not, of course, obtained by a house to house canvass, which, as a little reflection will show, would not have been at all practicable with the time and money at command, but was obtained by getting from poor-law officers, private charity workers, school teachers and others, the names and addresses of those known to them as clearly feeble-minded. For the purpose of argument it may be assumed that there were many border-line cases, so called, omitted from the county because they have not been clearly recognized as feeble-minded. As a matter of fact it is frequently more by accident or by the development of some acute situation, that such cases are discovered at all. The machinery for measuring and observing them, and thereby coming to a just conclusion in individual cases, is largely lacking in this State as it is elsewhere. This is particularly so outside of the city of New York. In New York City, in very recent years, this defect in method has been recognized and to some considerable extent remedied, through the organization of the "Clearing House for Mental Defectives," largely through the unquenchable enthusiasm of Dr. Max G. Schlapp, a member of the State Commission to Investigate Provision for the Mentally Deficient, and by the organization of a number of clinics for this purpose. The "Clearing House" was officially established in connection with the Department of Public Charities by my successor, Commissioner Drummond, in January, 1913. More than 5,000 cases have already passed through its doors.

The Border-line Case.

What is known as the border-line case must always be a perplexing individual problem. How many feeble-minded there are in the moron class we have no present means of knowing. We have, as I have said, no State-wide machinery for measuring their mentality and no ordinary census will answer. But we can readily believe that there must be many thousands of them at liberty, as well as in the reformatories, prisons and jails.

Then above this class there are thousands of others who cannot possibly be counted. They can be dealt with only when they bring themselves in one way or another within the scope of the law. That few persons are entirely perfect we may learn from a study of the Scriptures, which say (Ecclesiastes 7: 28) "One man among a thousand have I found; but a woman among all those have I not found." But there have been a few changes since then.

The Treatment of the Border-line Case.

Unlike the cases of the idiot and the imbecile, border-line cases cannot be treated practically *en masse.* Every effort should be made to eliminate children from the list of the feeble-minded. The doubtful cases should have every possible advantage of training, and of medical and surgical treatment, if necessary, to overcome what may prove to be mere backwardness or retardation and only after they have had a fair chance with negative results, should they be regarded as actually feeble-minded. Even then the cases in the highest grades are often entitled to the " test of liberty," as it has been called, before any attempt is made to segregate them in custodial asylums. The determining factor must in many instances, be the temperament rather than the mental alacrity of tne mentally deficient who are of high grade. Can they live in a calm and orderly manner and manage to get along in life? Or, on the other hand, are they nervous and excitable and unable to fit themselves or be fitted to their environment? Dr. Gertrude E. Hall, who is at the head of the " Bureau of Analysis and Investigation " of the State Board of Charities makes this interesting observation on the subject:

" Evenness of disposition is more important for success in many lines of business than a high degree of mentality. Many men with nine year mentalities earn their living and are respectable citizens. Telephone switchboard girls are often highly satisfactory with ten year mentalities, provided they are patient and even tempered. Hotel waitresses are found, when tested, to fall largely in the moron class, and yet many of them are expert in their line of business. Nervous instability is more important to estimate in troublesome border-line cases than the precise degree of intellectual power. The tests at present used give relatively too much attention to the latter and provide too little information concerning the former."

But you may say that this is commonly a test for persons supposed to be normal minded and so it is. In many respects the test must be the same. How do they manage when at liberty? In the case of the feeble-minded, however, there is a difference. It matters not whether the feeble-minded retain the characteristics of a simian ancestry, as some authorities assert, or are the victims of the deficient secretion of various glands, as others contend. They have in very many cases, whatever the cause of their enfeebled mentality, the power of transmitting their mental defect to succeeding generations. It is important, therefore, to determine the family history in every suspected case and if it is found that the feeble-minded is of the clearly inherited and transmissible type, then, wherever possible, the feeble-minded person, if either dependent or delinquent, should be segregated by the State for its own welfare, as well as for the safety of the individual under consideration.

There can be no doubt, I take it, but that, for sex reasons, in the case of the feeble-minded at least, "The female of the species is more deadly than the male," and that the younger woman should be among the first for whose care provision should be made. With her, it is sad to say, the question of race suicide is eliminated, and the words of the Psalmist (116:6), "The Lord preserveth the simple," are exemplified. At the same time there are many poor families absolutely unable to care for idiot or imbecile children of either sex and their condition and needs should not for a moment be lost to sight.

As I said to this Conference, upon another occasion, there are so many of the high grade feeble-minded that they cannot all be segregated. They must be educated and trained in the public schools, if they are to be educated or trained at all. This education should, however, be much more largely along industrial lines than is the case at present. Less scholastic and more vocational training should be aimed at in dealing with the moron class. But this does not mean that those who are clearly idiotic or imbecile should be educated and trained in the public school. Those who are in these two classes should, as a rule, have humane custodial care as soon as possible. Most of them can be made useful and happy in the institutions, while they are usually useless and unhappy when they are at liberty. The higher grade imbecile woman, when at liberty, constitutes a particularly dangerous menace to the well-being of society.

Briefly to sum up the subject: We need to improve our system of mental measurement in a practical way. We must extend and improve our facilities for the care of the mentally deficient who are dependent. They should be removed from the almshouses and from families unable to care for them properly. We should have entirely separate institutions for the mentally defective delinquents, who can then be removed from the prisons and reformatories. There is no more reason why the mentally defective dependent should be maintained with the mentally deficient delinquent than there is for keeping the normal minded dependent and the normal minded delinquent together. There is rather less reason if anything for keeping the mentally deficient of these two classes together because, owing to lack of balance, they are much more susceptible to evil suggestion than are those of normal mind. They do not hear imaginary "voices," as do the insane, but constantly they hear the actual voices of evil companions of stronger minds, urging them to deeds of crime against person and property.

The institutions for the dependent feeble-minded should be made inviting so that the poor will wish to place their children there. This should insure a larger measure of segregation than will be the case if legal commitment is insisted upon. Our magistrates are inclined to be very conservative in dealing with this class whose commitment is urged upon them. They are apt to overlook the eugenics of the situation and, in the case of the moron, to assert that the individual under consideration seems to be bright enough so far as they can see. In dealing with this class they exemplify Kipling's statement about the male sex generally:

> "Man, a bear in most relations, worm and savage otherwise,
> Man propounds negotiations, man accepts the compromise;
> Very rarely will he squarely push the logic of a fact
> To its ultimate conclusion in unmitigated act."

Those who are interested in a study of the vagaries of the feeble-minded who manage for a time to return to the outside world should read "The Career of a Moral Imbecile," "The Story of Albertus," "The Criminal Irresponsible," and other interesting studies by Martin W. Barr, M. D., Chief Physician of the Pennsylvania Training School for Feeble-minded Children at Elwyn. These help to show clearly the necessity for a much more careful segregation of the several classes of the feeble-minded, so that those of criminal tendencies will be deprived of the opportunity of influencing for evil the lives of other mental defectives who might, perhaps, under proper supervision, be able to live in an honest and more or less useful manner.

Whenever the State can unloose the shackles of "Economy" which for several years past have been binding so tightly, it is possible that the work of the State Industrial Farm Colony for tramps and vagrants will be started. The site for this Colony was purchased several years ago, but nothing has been done to develop it. There can be no doubt but that a great many of the older feeble-minded should find their way into this institution where, possibly, through some slight amendment to the law, they could be kept as long as they lived. The new State Farm for Women at Valatie has already commenced to receive women inmates. As its census enlarges, a considerable percentage of the inmates will no doubt be found to belong to the mentally deficient class. It should be made possible for them, too, to remain as long as they live, within the sheltering walls of the institution.

If we are ever to meet the needs of the situation in a practical and logical way we must make much greater progress in the future than we have made in the past. It must be counted a great gain to have conferences such as this to spread the light and thereby to influence public opinion in the right direction.

NEUROPATHIC AND PSYCHOPATHIC HOSPITALS WITH REFERENCE TO MEDICAL TEACHING

Read at the Annual Meeting of the American Neurological Association, held at Albany, N. Y., May 7th, 8th and 9th, 1914.

By RICHARD DEWEY, M. D.,
Wauwatosa, Wis.

The more amply equipped and highly advanced medical schools in our own country are giving increasing attention to neurology and psychiatry. Notwithstanding this, we are still far behind the schools of Europe in the teaching of these branches. A beginning has been made, however, in the establishment of neuropathic and psychopathic clinics and wards connected with hospitals, or independent establishments for nervous and mental cases. The number of such facilities is increasing and they will soon be recognized everywhere as necessary.

These facts make the consideration of teaching in this direction timely, as only a very limited beginning has been made in this respect. The first consideration for these neuropathic and psychopathic clinics, wards or hospitals is, of course, the proper care of their patients, but an additional, very important function is that of employing them as a valuable, and indeed indispensable, adjunct to the teaching of medicine.

It may be taken for granted that special provision for neuropathic and psychopathic patients will eventually be made in every large city. There have been many eloquent utterances on this subject in the recent past, by those competent to speak in these matters. For want of time, I omit citations but will mention among others the discussion before the section of nervous and mental diseases of the American Medical Association led by Dr. Southard at Minneapolis last year;[1] a recent paper by Dr. William A. White[2] on the relation between the general and the psychopathic hospital; an article by Dr. Franz[3] on "Psychological Factors in Medical Practice;" also an editorial by Dr. Henry M. Hurd[4] on "Mental Cases in General Hospitals"—all emphasizing different aspects of advance in hospital provision and in teaching Neurology and Psychiatry.

There is, however, an intense need of enlightenment of the profession as a whole and of the governing bodies of medical schools as to the importance:

First, of special hospital provision for mental and nervous cases, not of insanity only, but of delirium, traumatism, post operative psychosis, toxic and other psychopathic conditions.

Second, of instruction in medical schools in order that the newer generation of medical men may be more adequately equipped for the new conditions. Additions to general hospitals like "Pavilion F" at Albany, the result of Dr. Mosher's admirable pioneer work:—or psychiatric clinics like those of Michigan University, those at Boston and at Baltimore, or State pathological institutes like those of New York and Kankakee need to be provided. Such foundations for psychiatry and neurology are, I think, now recognized as essential by those like the members of this Association who are familiar with this field. But the general profession needs to be more enlightened on this point and these establishments should be made integral parts of the medical school to the extent that other hospitals are.

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[1] Journal A. M. A., November 29th, 1913.

[2] Modern Hospital, March, 1914.

[3] "Psychological Factors in Medical Practice:" International Med. Jour., Vol. XXI, No. 1, 1914.

[4] "Mental Cases in General Hospitals," Modern Hospital, March, 1914.

These independent institutions or additions to other hospitals have already furnished opportunities to a certain extent for students or graduates to equip themselves, and our great state institutions have also been utilized here and there but in a most limited and unsatisfactory way. Systematic and required undergraduate work, so far as I know, has only been inaugurated to a certain extent in the schools of Michigan University of Harvard and Johns Hopkins. Such additions are now, I think, recognized as essential by men like the members of this body, but are little appreciated by the profession at large. I will venture to describe, very briefly and crudely, I fear, what seem to me desirable features of such a foundation for teaching Neurology and Psychiatry.

Such a department, either an independent institution or an annex to an existing one, should have preferably a Neuropathic and a Psychopathic division, subdivided again for men and women patients. No strict line can be drawn between the neuroses and the psychoses and a single institution will in some cases be all that can be attained.

Considering now the neuropathic and psychopathic wards or hospitals as a part of the teaching equipment of a medical school, the following requisites are important: An adequate faculty, is of course of the first importance, but I am speaking now of structural requisites. There should be class rooms for clinical and didactic instruction and demonstration, also laboratory facilities, both pathological and bacteriological (unless the clinic is connected with a large general hospital).

In any event neurological and psychological laboratories would be needed with facilities for teaching abnormal neurology and psychology (physiological neurology and psychology should be a part of the pre-medical course). Medical hygiene, psychiatry and psycho-therapeutics should be taught in their full extent, including whatever is of value in suggestive therapeutics, hypnotism and (shall we say? psychoanolysis?

The wards in question would have a great variety of cases and conditions and would need a corresponding variety of structural facilities. There should be a few rooms for disturbed patients, not necessarily psychopathic, but for patients temporarily noisy or violent from toxic or other causes. These rooms should be thoroughly sound-proof and, as windows would need at times to be closed, should perhaps be provided with "safety deposit vault ventilation," as suggested by Dr. Southard. There should be connected bath rooms in abundance for continuous baths and for every form of hydrotherapeutics. An operating room should also be convenient and a well-equipped dayroom or recreation room. If a garden were accessible, this, too, would have decided value.

A protected garden on the roof as at Boston and at the Henry Phipps Institute would be useful, especially in the absence of adequate grounds. There is scarcely a feature more important than the opportunity for a *sense of freedom* and for the diversion of thought afforded by access to nature in garden and grounds; spacious and wooded if possible. One of the misfortunes for such inmates is a location where the streets of a built-up city, alleys or walled courts supply (as in many cases at present), the only opportunity for access to the outside world. Those familiar with such patients know how multiform are their needs and the phases of their mental condition. I would even hope for a basin and a fountain of running water with flowers and plants in bloom; also birds and fishes to attract the eye of the nervously and mentally self-centered or depressed.

Such arrangements as are here suggested together with construction of rooms which I am about to suggest; would obviate both the disturbance of mentally and nervously abnormal patients in the general wards and the injustice often done the toxic or Manic-Depressive case, by unnecessary chemical (hypodermatic) or even mechanical restraint.

I refer to some further appliances of a structural sort that would add to convenience, safety and order. There should be some rooms with an alcove eight feet or so in width, generally to be kept open, but capable of being shut off when occasion requires, by a substantial sliding door. The patient will then — when the alcove is closed — be in an apartment suitable to his condition if disturbed or subject to paroxysms of excitement, and movable articles would be out of harm's way in the alcove. There should also be outer window guards; plate glass windows; inner window guards and finally; wooden shutters, all sliding and adjustable; — each to be used as occasion might require, the rooms thus being rendered adjustable to the condition of the patient, could be thoroughly ventilated by known architectural devices.

This psychopathic ward in cases forming a part of a detention hospital belonging to a municipality could be provided as is done in Chicago, with chambers where the municipal or county judge could hold court and legal commitment, where necessary, could thus be provided for.

And here it is necessary to consider the question of commitment; regarding the great majority of patients, no question need come up, but certain exceptional cases offer embarrassment in this respect. Heretofore, the exception has been made the rule and has governed largely the arrangements. I desire to invite consideration of a view from a different standpoint to that generally taken.

The rare cases in which the question of personal liberty comes up hinge almost invariably upon the question of *detention,* not upon that of *admission.* It seems to me that, under our present system in the vast majority of cases, the law locks the doors *before* instead of *after* the horse is stolen which is quite correct, but also locks the doors *when there are no thieves around.*

It is only in one case out of scores that there is a difference of opinion as between the patient and the rest of the world. If the patient insists upon going, when it is important to detain him for his own or other's good, give him the right of petition and let the Court attend to his case. It is the question of *exit* not of *entrance* that is important. It can hardly be disputed that, if such legal safeguards were taken, no patient would ever be kept in against his will without legal warrant and thus the main difficulty would be met, and furthermore, hundreds would not be quite necessarily deprived of liberty and publicly stigmatized as is now the case. If, in other words, provision were made by legal enactment. To judicially ascertain the wish of every patient, either to stay or to go, at just as frequent intervals as might be deemed necessary, the ends of justice would be met. Legal arrangements would be necessary to register officially, as a part of the machinery of the Court, every admission to the psychopathic ward and thus the law need only take cognizance of such patients as in wishing to go, *need* a judicial determination of their rights. Of course legal commitment to the psychopathic and to the State hospital could occur whenever necessary or desirable precisely in the same way as at present. (The machinery of the Court being a necessary attachment of the Detention Hospital.) The point is that such commitment need be but rarely obtained, as the great majority of inmates would go voluntarily, as they now do, to any hospital and would, with these rare exceptions, be free to go and come at their own pleasure. Of course the exception is important and needs judicial interpretation.

SUMMARY.

I have thus sought to outline briefly some of the conditions as they present themselves to my mind; of the necessary provision for neuropathic and psychopathic patients and to give suggestions for clinically and didactically presenting, in an enlightened manner, in the medical school, the instruction which now I believe we all agree is necessary for the adequate teaching of these subjects.

Editorial

It has been said that the greatest curse to each of the South Sea Islands was the first man who discovered it; and every one who knows anything of the history of our commerce in those parts knows how much truth there is in this; and that the white men, with their vices, have brought in diseases before unknown to the islanders, which are now sweeping off the native population of the Sandwich Islands at the rate of one-fortieth of the entire population annually. They seemed to be a doomed people. The curse of a people calling themselves Christians seems to follow them everywhere; and even here, in this obscure place, lay two young islanders, whom I had left strong, active young men, in the vigor of health, wasting away under a disease which they would never have known but for their intercourse with people from Christian America and Europe. One of them was not so ill, and was moving about, smoking his pipe, and talking, and trying to keep up his spirits; but the other, who was my friend and *aikane*, Hope, was the most dreadful object

> I had ever seen in my life—his eyes sunken and dead, his cheeks fallen in against his teeth, his hands looking like claws; a dreadful cough, which seemed to rack his whole shattered system, a hollow, whispering voice, and an entire inability to move himself. There he lay, upon a mat on the ground, which was the only floor of the oven, with no medicine, no comforts, and no one to care for or help him but a few Kanakas, who were willing enough, but could do nothing. The sight of him made me sick and faint. Poor fellow!
>
> *Two Years Before the Mast.* RICHARD HENRY DANA.

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Dr. Dawes' Report on the Alien Insane.

That the alien insane in the State of New York impose a heavy burden on the taxpayers and constitute a most serious menace from a eugenic standpoint is clearly demonstrated in the comprehensive report submitted to Governor Glynn by Dr. Spencer L. Dawes, Special Commissioner on the Alien Insane. The report is based on a thorough study of the following topics:

A. Immigration. Conditions at Ellis Island were inspected and inquiry was made into the methods used by Federal officials in examining the immigrants upon their entrance into this country. The representatives of steamship companies were questioned as to the methods employed in inducing immigrants to come to the United States, and in examining immigrants prior to debarkation.

B. Alien insane now being cared for by the State of New York. A census of the patients in the fourteen civil hospitals of the State was taken with respect to nativity and citizenship, and the results tabulated.

C. Admission of the alien insane to the civil hospitals of New York State. A statistical card setting forth facts with respect to nativity, citizenship and parentage was prepared at the civil State hospitals for each patient admitted from 1905-12 inclusive. These cards after being filled out were forwarded to the statistician of the State Hospital Commission for tabulation. The magnitude of this study is indicated by the fact that more than 50,000 admissions were reported and tabulated.

D. Cost of the alien insane to the State of New York. Full data concerning the expenditures of the State for the alien insane and the amounts paid to the State by such insane patients or their relatives were obtained and the results tabulated.

E. Deportation and repatriation of alien insane. The officers of the State Bureau of Deportation were examined and full inquiry made into methods of deportation and repatriation, and statistics compiled relative to the number of insane patients removed from the State since 1905.

F. Legal aspects of the problem. The legal remedies to be applied to relieve the State of the burden of the alien insane were made a subject of special study by Lewis R. Parker, Esq., counsel to the Commissioner.

G. Eugenic effects of the admission of aliens with psychopathic tendencies.

With respect to immigration, Dr. Dawes finds that the mental examination at Ellis Island should be much more carefully made and that steamship companies should be required to examine into the mental status of immigrants before permitting them to embark for this country. He also finds that steps should be taken to improve the environment of the immigrant upon his arrival in this country. By keeping out those with marked psychopathic tendencies and by alleviating the struggles of the poor immigrants upon their arrival, the number of alien admissions to our State hospitals might be greatly lessened.

The necessity for some action to cut off the stream of alien insane pouring into the State hospitals is evident from the statistics compiled from the census of the patients in the hospitals on September 30, 1912. On that date the total number of insane patients cared for in the civil hospitals of the State was 31,624. Of these 17,896, or 56.6 per cent, were native born and 13,728, or 43.4 per cent, were foreign born. Of the foreign born, 9,241, or 29.2 per cent of the total hospital population of the State, were aliens. In the two largest hospitals of the State, which are located near New York City, the aliens constitute more than 40 per cent of the patient population. As all of the State hospitals are overcrowded and as immense sums are required for additional accommodations each year, the presence of so many alien insane makes it extremely difficult for the State to properly care for its citizen insane.

The statistics with respect to the admission of foreign-born and alien insane to the State hospitals show that the percentage of foreign-born and alien patients admitted each year has varied but little during the past eight years, while the absolute number of such admissions is each year increasing. Of the total admissions to the State hospitals from 1905-12 inclusive, 15,908, or 30.5 per cent, were aliens and 2,439, or 4.7 per cent, were of unascertained citizenship. It is probable that most of the latter were aliens. The foreign-born population of the State has a much higher rate of admissions to the State hospitals for the insane than has the native-born population. As New York State has a relatively large proportion of foreign-born population compared with the United States as a whole, it consequently has a disproportionate number of foreign-born and alien insane.

The Bureau of Deportation has rendered valuable service to the State in removing the alien insane subject to deportation under the Federal immigration law, and such other insane aliens as can be induced to return to their former homes. The total saving in net cost resulting from the removal of 1,753 aliens and non-resident insane in 1912 is computed to be $3,872,973.02. It is also computed that the total saving in net cost to the State for each dollar expended by the Bureau of Deportation in removing aliens and non-resident insane is $82.51. Commissioner Dawes finds that the work of the Bureau has been hampered by the restrictions placed on its work by the Federal Department of Labor and its predecessor the Department of Commerce and Labor.

The burden of changing present conditions is clearly upon the Federal government. Congress regulates immigration and the State has no option in regard to the acceptance of persons admitted to this country by the immigration authorities. To remedy matters, it is recommended that the present immigration law be more rigidly enforced and that the public health service charged with the examination of immigrants be given adequate facilities for its work, and be supplied with a corps of trained assistants. The report urges that more consideration should be given to the rights of the State before warrants of deportation are cancelled. The immigration act should be amended so as to exclude in addition to the present "excluded classes " of immigrants those with chronic alcoholism and those with constitutional psychopathic tendencies. The Federal government should assume the entire financial burden of the alien insane in public institutions at the present time and of the aliens who may hereafter be admitted thereto. If this was done Congress could be safely trusted to make proper laws for the admission of immigrants and for returning those aliens that become public charges in this country.

That the eugenic effects are the most serious of all may be readily deduced from the startling statement in the report that *while forty-five per cent of the admissions in 1912 were foreign-born, more than sixty-three per cent of those admitted had both parents of foreign parentage.* It is certainly highly undesirable that the American stock should be degraded by the entrance into this country of alcoholic, feeble-minded, insane, neuropathic, or psychopathic immigrants. To graft such defective elements on our present American stock would have a deteriorating effect upon our race for untold generations.

Eight thousand copies of the report have been distributed throughout the country and one has been placed in the hands of each member of Congress and will undoubtedly exert considerable influence in shaping new legislation relative to immigration.

HORATIO M. POLLOCK.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, NOVEMBER, 1914.

COMPILED BY WILLIAM F. FULGRAFF, REGISTRAR.

Deaths.

Consumption	10
Typhoid fever	2
Scarlet fever	1
Measles	0
Whooping cough	0
Diphtheria and croup	2
Grippe	0

Diarrheal diseases	2
Pneumonia	7
Broncho-pneumonia	2
Bright's disease	14
Apoplexy	11
Cancer	11
Accidents and violence	5
Deaths under one year	11
Deaths over 70 years	32
Total deaths	149
Death rate	16.47
Death rate less non-residents	12.71

Deaths in Institutions.

	Resident	Non-Resident
Albany Hospital	14	10
County House	5	1
Homeopathic Hospital	4	5
Hospital for Incurables	1	1
Little Sisters of the Poor	1	2
Penitentiary	1	0
Public places	0	2
Sacred Heart Convent	0	1
St. Margaret's House	0	2
St. Peter's Hospital	2	7
Maternity Hospital	1	5
Labor Pavilion	1	0
Totals	30	36
Births	176	
Still births	7	

TUBERCULOSIS.

Bender Laboratory Report on Tuberculosis.

Positive		4
Negative		16
Total		20
Living cases on record November 1, 1914		348
Cases reported:		
By card	35	
Dead cases by certificate	3	
		38
Total		386

Dead cases previously reported	7	
Dead cases not previously reported	3	
Removed	5	
		15
Living cases on record December 1, 1914		371
Total tuberculosis death certificates filed during November		10
Non-resident deaths:		
Albany Hospital	1	
C. F. L. Pavilion	1	
		2
Resident deaths		8

Report of Visiting Tuberculosis Nurse.

Old cases	10
New cases	18
Returned from hospitals	10
Total	38
Disposition of old and new cases:	
Died	1
Sent to hospitals	10
Left town	3
To general tuberculosis nurse	15
Remaining under treatment	9
Total	38
Visits made	26
Visits made, old cases	125
Calls at Board of Health office	25

Bureau of Contagious Disease.

Cases Reported.

Typhoid fever	8
Scarlet fever	27
Diphtheria and croup	20
Chickenpox	41
Measles	1
Whooping-cough	3
Consumption	38
Total	138

Contagious Disease in Relation to Schools.

	Reported D.	 S.F
Public School No. 1	1	..
Public School No. 6	1	..
Public School No. 7	..	1
Public School No. 8	..	3
Public School No. 15	..	1
Public School No. 17	3	..
Public School No. 18	4	..
Public School No. 20	..	2
Public School No. 21	1	..
Public School No. 24	1	..
High School	..	2
Holy Cross School	..	1
Christian Brothers' Academy	1	..
St. Joseph's Academy	..	2
Cathedral School	1	1
St. Mary's School	..	1

Number of days quarantine for diphtheria:
Longest...... 30 Shortest....... 5 Average....... 16 4/16
Number of days quarantine for scarlet fever:
Longest...... 50 Shortest....... 30 Average....... 30 15/27
Fumigations:
Houses.................... 68 Rooms.................... 292

Cases of diphtheria reported	20
Cases of diphtheria, antitoxin used	12
Cases of diphtheria, antitoxin not used	8
Deaths after use of antitoxin	1

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria.

Initial positive	33
Initial negative	219
Release positive	22
Release negative	113
Suspicious	5
Total	392

Test of Sputum for Tuberculosis.

Initial positive	8
Initial negative	36
Total	44

Bureau of Markets and Milk.

Public market inspections	19
Market inspections	59
Fish market inspections	11
Rendering house inspections	1
Packing house inspections	1
Dairies inspected	45
Milk houses inspected	45
Milk houses deficient	31
Milk depots inspected	7
Milk wagons inspected	28
Milk cans inspected	126
Cows examined	653
Cows quarantined	4
Cows removed	2
Sediment tests	57
Lactometer readings	11
Temperature readings	11
Fat tests	5
Post-mortem examinations, cows	11
Foot and mouth investigations, cows	653
Meat condemned, beef (lbs.)	200

Miscellaneous.

Work certificates issued to children	12
Number of complaints of nuisances	38
Privy vaults	4
Closets	4
Plumbing	8
Other miscellaneous complaints	22
Number of dead animals removed	298
Cases assigned to health physicians	77
Calls made	181

Medical News

Edited by Arthur J. Bedell, M. D.

Albany Guild for the Care of the Sick.—Department of Visiting Nursing.—Statistics for November, 1914.—Number of new cases, 183; classified as follows: Dispensary patients receiving home care, 21; district cases reported by health physicians,, 12; charity cases reported by other physicians, 49; moderate income patients, 77; metropolitan patients, 24; old cases still under treatment, 212; total number of cases under nursing care during month, 395. Classification of diseases for the new cases: Medical, 33; surgical, 8; gynecological, 2; obstetrical under professional care, mothers, 47, infants, 47; eye and ear, 0; skin, 1; throat and nose, 1; dental, 0; infectious diseases in the medical list, 44. Disposition: Removed to hospitals, 22; deaths, 15; discharged cured, 115; improved, 28; unimproved, 13; number of patients still remaining under care, 202.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 2; students in attendance, 2; nurses in attendance, 2; patient carried over from last month, 1; new patients during month, 3; patients discharged, 3; visits by head obstetrician, 0; by attending obstetrician, 0; by students, 30; by nurses, 31; total number of visits for this department, 61.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 1,363; for professional supervision of convalescents, 846; total number of visits, 2,209; visits to pay cases, 701; to charity cases, 662; unrecorded visits, 846; cases reported to the Guild by 4 health physicians and 39 other physicians; graduate nurses 8, certified nurses 1, and pupil nurses 7 on duty.

Dispensary Report.—Number of clinics held, 100; new patients, 185; old patients, 426; total number of patients treated during month, 611. Classification of clinics held: Surgical, 14; nose and throat, 7; eye and ear, 17; skin and genito-urinary, 7; medical, 14; lung, 10; dental, 0; nervous, 5; stomach, 5; children, 11; gynecological, 10.

Medical Society of the County of Albany.—A meeting of the Medical Society of the County of Albany was held at the Education Building, Medical Library, Tuesday evening, December 8, 1914, at 8:30 p. m. Dr. Wisner R. Townsend, of New York City, addressed the meeting on the "Functions of a County Society." The regular December meeting was held at the Elks Club, Friday evening, December 18, 1914, at 8:30 p. m. The scientific program consisted of a Symposium on Exophthalmic Goitre with the following papers: "Pathology," Dr. Ellis Kellert; "Pathological Chemistry and Phipeology," Mr. Arthur Knudson, A. B.; "Etiology and Symptomatology," Dr. C. B. Hawn; "Medical Therapeusis," Dr. Erastus Corning; "Surgical Therapeusis," Dr. A. H. Traver.

Medical Society of the County of Monroe.—The Medical Society of the County of Monroe has adopted the following resolutions:

Whereas, The Medical Society of the County of Monroe recently undertook an investigation into the prevalence and the causation of the practice of secret division of fees and granting of commissions in this county and vicinity, in an impartial and unprejudiced manner, it now seems desirable that the Society take a definite economic and moral stand on the question.

Therefore, Be it Resolved that the Society hereby expresses itself definitely as being vigorously opposed to this practice in any form whatsoever; that there is no justification of this practice even on economic grounds for it seems entirely improbable that there will grow up any adequate recognition of the value of purely Diagnostic Medical Services, until this evil secret adjustment be abolished, and that a correct and sufficient fee for such services be openly and courageously charged in its stead.

Further, Be it Resolved that the Society hereby inform the whole profession that our Constitution and By-Laws have always provided for the discipline of our members by censure, suspension or expulsion for such and other violations of the Principles of Medical Ethics by which all the members are bound; but that nevertheless the Society as a whole realizes that the solution of the problem lies in the ethical conduct and high moral tone of the individuals of the profession and this Medical Society of the County of Monroe therefore urges each one of the profession individually, whether a member of this Society or not, not only to refuse to engage in this practice but vigorously to oppose the same whenever and wherever possible.

MEDICAL SOCIETY OF THE COUNTY OF SCHENECTADY.—The annual meeting of the Medical Society of the County of Schenectady was held at the Mohawk Club, Tuesday evening, December 8, 1914, at 8:30 P. M. The scinetific program consisted of the president's address by Dr. Lester Betts.

MEDICAL SOCIETY OF THE COUNTY OF RENSSELAER.—The annual meeting of the Medical Society of the County of Rensselaer was held at the County Court House, Troy, December 16, 1914, at 8:30 P. M. Dr. George Blumer of New Haven, Conn., read a paper on "The Medical Treatment of Peptic Ulcer." Dr. Thomas Ordway of Boston, Mass., read a paper on 'Radium Therapy of the Huntington Hospital, Harvard University."

SARATOGA SPRINGS MEDICAL SOCIETY.—A meeting of the Saratoga Springs Medical Society was held at the Business Men's Association Rooms on Friday evening, November 27, 1914, at 9:00 P. M. Dr. A. S. Downs reported a case of "Pavor Nocturnus." Dr. G. Scott Towne reported a case of "Eclampsia."

VITAL STATISTICS.

Questions in vital statistics asked in examinations for entrance to the United States Public Health Service.

1. What are vital statistics? 2. What is meant by demography?

Population Statistics.—3. How is the population of a city or State ascertained? 4. For the purposes of vital statistics, how is the population of a city or State ascertained for years between censuses? 5. Discuss methods of estimating population for intercensal and postcensal periods. 6. Discuss the relationship between population statistics and birth, marriage, morbidity, and mortality statistics. 7. A city had 100,000 inhabitants at the time of the taking of the Twelfth Census (June 1, 1900), and 123,700 at the time of the taking of the Thirteenth Census (April 15, 1910). Give the estimated population of that city as of July 1, 1915, on the basis of arithmetical increase. 8. In a city having a population of 57,600 April 15, 1900, and of 66,300 April 15, 1910, what will be the estimated population as of July 1, 1914, the estimate to be made on the basis of arithmetical increase? 9. In a city of which the enumerated population April 15, 1910, was 66,300, and in which the average annual rate of increase during the previous intercensal period figured on a geometrical basis of increase had been 3 per cent, what will be the estimated population as of April 15, 1915, figured on the geometrical basis of increase?

Marriage Registration and Statistics.—10. What purposes are served by the registration of marriages? 11. Describe a common method in use in the United States by which the registration of marriages is accomplished. 12. What are marriage rates? 13. How are marriage rates expressed; that is, in what terms are they usually stated? 14. What factors influence marriage rates? 15. In a city having a population of 53,420 inhabitants at the taking of the Twelfth Census (June 1, 1900), and of 72,643 at the taking of the Thirteenth Census (April 15, 1910), there were during the calendar year 1913, 576 marriages recorded. What was the marriage rate for the year?

Birth Records and Statistics.—16. What purposes are served by the registration of births? 17. What is a birth certificate, by whom should it be made out, and with whom registered? 18. Describe a method in common use in the United States for the registration of births and the compilation of birth statistics for a State. 19. What are the essential data usually required in birth certificates? 20. What are birth rates? 21. How are birth rates expressed; that is, in what terms are they usuallly stated? 22. What factors influence birth rates? 23. What uses are made of birth records in public health administration? 24. Upon what does the accuracy of birth records and birth statistics depend? 25. The city of E had 125,632 inhabitants on January 1, 1913, and 130,368 inhabitants on December 31, 1913. During the month of June, 1913, there were 247 births and during the month of July, 1913, there were 223 births recorded. Give the birth rate for the city during the period June 1 to July 31, both days inclusive; also give the birth rates for June and July separately. 26. In a city which had a population of 44,360 April 15, 1900, and of 53,230 as enumerated April 15, 1910, and which, during the calendar year 1913, had 1,376 registered births, what was the crude or general birth rate for the calendar year 1913? In estimating population use the arithmetical method.

Morbidity Reports and Statistics.—27. What are morbidity reports? 28. How are morbidity reports obtained? 29. What are morbidity statistics? 30. How are morbidity statistics obtained? 31. Describe a method in common use in the United States for securing morbidity reports. 32. What purposes are served by morbidity reports? Of what use are they to a local health department? Of what use to a State health department? Of what use to the Federal health service? 33. Why is the reporting of cases of communicable diseases to the health department by practising physicians necessary for the control of these diseases? 34. What factors influence the completeness with which morbidity reports are obtained in a community? 35. Upon what does the accuracy of morbidity reports depend? 36. What are morbidity rates? 37. What are crude morbidity rates? 38. What are specific morbidity rates? 39. How are morbidity rates expressed, that is, in what terms are they usually stated? 40. What are fatality, or case mortality rates, and how expressed, that is, in what terms are they usually stated? 41. The city of F had an estimated population of 324,000 on July 1, 1912. During the year 953 cases of typhoid fever were reported in the city and there were 51 death certificates registered in which typhoid fever was given as the cause of death. Give the typhoid morbidity rate, case mortality rate, and death rate. 42. The population of the city of G was 11,400 at the time of the taking of the Twelfth Census, June 1, 1900. On April 15, 1910, the population was 14,560. During the year 1912, 75 cases of diphtheria occurred in the city. Of the 75 cases 6 terminated fatally. In making a report of the epidemic what would you report the morbidity rate of diphtheria to have been, what the diphtheria fatality (case mortality) rate to have been, and what the mortality rate?

Death Registration and Statistics.—43. What purposes are served by the registration of deaths? 44. What is a death certificate, by whom is it made out, and with whom registered? 45. Describe a method in common use in the United States for the registration of deaths. 46. What are the principal data called for by the United States standard death certificate? 47. What is the registration area for deaths of the United States Census Bureau? 48. What are mortality statistics? 49. What are death rates? 50. How are death rates expressed, that is, in what terms are they usually stated? 51. What are crude death rates, specific death rates, standardized (sometimes called corrected) death rates? 52. What factors influence crude death rates? 53. What effect have variations in age distribution of population on crude death rates? 54. Upon what does the accuracy of death registration and mortality statistics depend? 55. What uses are made of the records of deaths and of mortality statistics in public health administration? 56. How is the data obtained from which the United States Census Bureau compiles the mortality statistics of the registration area for deaths? 57. To what extent do mortality statistics show the actual causes of death and upon what does their accuracy in this depend? 58. On July 1, 1914, the city of D had 51,200 population. During the calendar year 1914 there were 896 death certificates registered. How would the crude death rate for the year 1914 ordinarily be expressed? 59. In a city having a population of 44,360 on April 15, 1900, and of 53.230, as enumerated April 15, 1910, and which during the calendar year 1913 had 932 registered deaths, give the crude, general, or central death rate for the calendar year 1913. 60. In a city which had a population of 44,360 on April 15. 1900, and 53.230, as enumerated April 15, 1910, and which during the first six months of the calendar year 1913 had 530 registered deaths, express the death rate for this period in terms of an annual rate per 1,000 population. 61. In a city which had a population of 44,360 on April 15, 1900, and 53,230, as enumerated April 15, 1910, there were during the month of April, 1913, 103 registered deaths. Give the April death rate expressed in terms of an annual rate per 1,000 population.

Infant Mortality and Life Tables.—62. What is meant by infant mortality? 63. What are infant mortality rates and how expressed? 64. What are life tables?

THE DIETETIC AND HYGIENIC GAZETTE AND THE CRITIC AND GUIDE.—The Dietetic and Hygienic Gazette and the Critic and Guide will be consolidated and under the editorship of Dr. William J. Robinson, after January, 1915.

CLIFTON SPRINGS SANITARIUM.—Dr. Malcolm S. Woodbury has been elected superintendent of the Clifton Springs Sanitarium.

REMEDIES FOR INDIGESTION.—The Service and Regulatory Announcements of the Bureau of Chemistry, U. S. Department of Agriculture, state that examination of a number of products which purport to contain certain enzyms or ferments supposed to be useful in promoting digestion shows that these contain little, if any, of these active agents. Further investigation shows that the manufacturers frequently have employed a sufficient quantity of pepsin, diastase, pancreatin, trypsin, or similar material, but in many cases no attempt has been made to determine whether the material used is really active. In certain cases, manufacturers have combined pepsin and trypsin which tend to negative each other, and in other cases they have used its pepsin in alkaline media, which destroy activity, and have combined trypsin with acid substances which are not suited to it. Under certain methods of preparing the remedies, heat is applied to a degree that may destroy the activity of the pepsin or other enzyms. Similarly, many of these substances which owe their properties to the action of enzyms, are put up in too strong alcoholic solutions or in other ways which lessen their effectiveness.

The great trouble with many of these preparations, however, is that they do not keep well, and while active at first, after a time lose their digestive activity. The Department of Agriculture therefore warns manufacturers that preparations claiming to contain digestive enzyms should be put up in such a way that they will have suffered little, if any, loss of activity when sold to the consumer.

In the case of preparations which are liable to deterioration within a few months, the Department suggests that each lot should be dated, and that sales after a certain fixed time should be prevented.

TEACHERS FOR DEFECTIVE CHILDREN.—The department of New York University for the training of teachers of defective children has 115 enrolled. A clinic is also conducted in connection with the work.

GOVERNMENT BARS MISLEADING LABELS.—The Department of Agriculture, through the Bureau of Chemistry, has issued the following suggestions to makers and proprietors of medicinal preparations:

" Claims of therapeutic effects: A preparation cannot be properly designated as a specific, cure, remedy, or recommended as infallible, sure, certain, reliable or invaluable, or bear other promises of benefits unless the product can as a matter of fact be depended upon to produce the results claimed for it. Before making any such claim the responsible party should carefully consider whether the proposed representations are strictly in harmony with the facts; in other words, whether the medicine in the light of its composition is actually capable of fulfilling the promise made for it. For instance, if the broad representation that the product is a remedy for certain diseases is made, as, for example, by the use of the word 'remedy' in the name of the preparation, the article should actually be a remedy for the affections named upon the label under all conditions, irrespective of kind and cause.

"Indirect statements: Not only are direct statements and representations of a misleading character objectionable, but any suggestion, hint, or insinuation, direct or indirect, or design or device that may tend to convey a misleading impression, should be avoided. This applies, for example, to such statements as 'has been widely recommended for,' followed by unwarranted therapeutic claims.

"Indefinite and sweeping terms: Representations that are unwarranted on account of indefiniteness of a general sweeping character should be avoided. For example, the statement that a preparation is for 'kidney troubles' conveys the impression that the product is useful in the treatment of kidney affections generally. Such a representation is misleading and deceptive unless the medicine in question is actually used in all of these affections. For this reason it is usually best to avoid terms covering a number of ailments such as skin diseases, kidney, liver, and bladder affections, etc.

"Rheumatism, dyspepsia, eczema, and the names of many other affections are more or less comprehensive and their use under some circumstances would be objectionable. For example, a medicine should not be recommended for rheumatism unless it is capable of fulfilling the claims and representations made for it in all kinds of rheumatism.

"Names like heart remedy, kidney pills, blood purifier, nerve tonic, bone liniment, lung balm, and other terms involving the names of parts of the body are objectionable for similar reasons.

"Testimonials aside from the personal aspect given them by their letter form, hold out a general representation to the public for which the party doing the labeling is held responsible. The fact that a testimonial is genuine and honestly represents the opinion of the person writing it does not justify its use if it creates a misleading impression with regard to the results which the medicine will produce.

"No statement relative to the therapeutic effects of medicinal products should be made in the form of a testimony which would be regarded as unwarranted if made as a direct statement of the manufacturer.

"Refund guarantee: Statements on the labels of drugs guaranteeing them to cure certain diseases or money refunded may be so worded as to be false and fraudulent and to constitute misbranding. Misrepresentations of this kind are not justified by the fact that the purchase price of the article is actually refunded as promised."

AMERICAN COLLEGE OF SURGEONS.—The third convocation of the American College of Surgeons was held at Washington, D. C., November 16, 1914.

A meeting was also held at the same place on Friday evening, December 18th, at 9:00 P. M. Scientific program. Subject: Glaucoma. "Etiology and Symptoms," Dr. M. E. Van Aernam. "Treatment and Report of Case," Dr. E. A. Palmer. Health Officer's report.

PERSONALS.—Dr. WILLIAM S. BRISTOL (A. M. C. '95), Albany, has removed from 80 South Ferry Street to 356 Hudson Avenue.

—Dr. S. B. WARD resigned as trustee of the State Normal College and Dr. ERASTUS CORNING (A. M. C. '07) has been elected to fill his place.

—Dr. JOHN P. O'KEEFE (A. M. C. '08) and Dr. DANIEL F. O'KEEFE (A. M. C. '12), Albany, have removed from 103 South Swan Street to 215 State Street.

—Dr. THOMAS M. HOLMES (A. M. C. '09) has left Clarksville and is now located at Delmar, N. Y.

—Dr. STERLING W. TODD (A. M. C. '12) is engaged in active practice at East Schodack, N. Y.

—Dr. DAVID T. BREWSTER, JR. (A. M. C. '13) has been appointed assistant physician at the Danvers State Hospital for the Insane, Hathorne, Mass.

MARRIED.—Dr. EARL W. FULLER (A. M. C. '08), Rome, N. Y., and Miss Lilian A. Elwood, at Downers Grove, Illinois, Thursday, November 26, 1914.

DIED.—Dr. ABRAM DEGRAFF (A. M. C. '58) died at his home at Guilderland, Albany County, N. Y., January 1, 1915, aged 79.

—Dr. HORACE R. POWELL (A. M. C. '82) died at his home in Poughkeepsie, N. Y., December 30, 1914, aged 54.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

Local and Regional Anesthesia, including Analgesia. By CARROLL W. ALLEN, M. D., of Tulane University, New Orleans, with an Introduction by RUDOLPH MATAS, M. D., of Tulane University, New Orleans. Octavo of 625 pages, with 255 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $6.00 net; half morocco, $7.50 net.

Dr. Rudolph Matas has for many years been a firm believer in the value of local and regional anesthesia and has advocated its more general use. In the introduction to the present volume he regrets that he could not have written it himself, but is satisfied that the work has been properly carried out by his former pupil, Dr. Carroll W. Allen.

Dr. Allen has elucidated his subject in a most complete manner. He has considered the history of local anesthesia; nerves and their sensations; osmosis and diffusion; toxicology; indications, contra-indications, and shock; anoci-association, etc., in individual chapters. In other chapters the various anesthetics are described and the general principles of technic as well as regional application is thoroughly discussed.

A combination of novocain and adrenalin would, at present, seem to be the ideal local anesthetic. Dr. Matas writes as follows: "Combinations of novocain and adrenalin in various isotonic dilutions—by practically eliminating the toxicity of the analgesic, increasing its stability, durability, and intensity—have so expanded the technic that in the hand of an expert peripheral analgesia may be made to encompass in its grasp almost the entire domain of operative surgery." J. M. B.

Serology of Nervous and Mental Diseases. By D. M. KAPLAN, M. D., Director of Clinical and Research Laboratories of the Neurological Institute, New York City. Octavo of 346 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $3.50 net.

This book by Dr. Kaplan treats of a subject which is still in process of evolution, and it is difficult under the circumstances to make very positive and definite statements. This is particularly true of the methods and results of treatment, but in the matter of laboratory and clinical technique the work is thorough, and may serve as a guide. There has been an exhaustive study of the literature of the subject, supplemented by the author's large practical experience. He lays especial emphasis upon the facts that the symptomatology to be derived from the serological investigations is only one part of the general clinical picture, and warns against too great reliance upon the information obtained from this source. The clinical symptoms of syphilitic diseases are usually more or less definite, and the specific infection is not always to be excluded because it is not sustained by the serological findings. On the other hand, definite results from investigation of the blood and cerebrospinal fluid may establish a diagnosis when the clinical symptoms are indefinite.

The author is properly conservative as to the effects of intraspinous injection of salvarsanized serum, and so justifies the scepticism of English writers who are loathe to accredit exceptional results to this line of treatment. It is not yet established that these rather heroic measures are more effective than other methods of treatment of syphilis, although the results in numerous cases justify further experimentation along this line.

Although the bulk of the book is given to the problem of syphilis, all other manifestations of infections in the blood and in the cerebrospinal fluid are included, and a copious and complete bibliography fills sixty pages and will prove very useful to any investigator.

The Tonsils—Faucial, Lingual, and Pharyngeal. With some account of the Posterior and Lateral Pharyngeal Nodules. By HARRY A. BARNES, M. D., Instructor in Laryngology, Harvard Medical School; Surgeon in the Department for Diseases of the Nose and Throat, Boston Dispensary; Assistant Laryngologist, Massachusetts General Hospital; Member New England Laryngological and Otological Society; Member American Laryngological, Rhinological and Otological Society. Illustrated. St. Louis: C. V. Mosby Company, 1914.

This little book fills a long felt want. It is the most complete work on the subject that has come to the notice of the reviewer.

There has never been a time, perhaps, when the necessity for the prompt removal of diseased tonsils is recognized as it is at present, and the knowledge of the danger of local and systemic infections, arising through the entrance into the blood and lymph streams of pathogenic organisms from the crypts of the tonsils, is by no means limited to the medical profession.

The school inspection of children's throats, has done much to educate teachers and the general public in this respect.

The book has many excellent illustrations, all original.

The chapter devoted to the general pathology and bacteriology of the tonsils, with their relation to systemic infections, is particularly noteworthy. C. F. T.

A Manual of Diseases of the Nose, Throat, and Ear. By E. B. Gleason, M.D., Professor of Otology in the Medico-Chirurgical College, Philadelphia. Third edition, thoroughly revised. 12mo. of 590 pages, 223 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $2.50 net.

This book is particularly intended for the use of students, and for that reason all unnecessary matter has been eliminated.

While the book is concise, nothing has been neglected, in fact, diagnosis and treatment, has been more thoroughly considered than in many of the more pretentious books on these subjects.

The chapters on diseases of the internal ear, and intra-cranial complications of aural suppuration, have been rewritten.

At the end of the book, the author gives a collection of excellent formulas, with a complete description of the better methods for the use of the more important drugs. C. F. T.

Physician's Visiting List (Lindsay and Blakiston's) for 1915. Sixty-fourth Year of its Publication. Philadelphia: P. Blakiston's Son and Co.

This well-known visiting list is now in its sixty-fourth year of publication and consequently needs but few words of comment.

It contains, in addition to the usual pages for the record of visits, addresses, obstetric engagements, births, deaths, accounts, etc., sections devoted to a brief discussion of incompatibility, poisoning, asphyxia, etc., and tables of weights and measures, conversion tables, and a full dose-table.

Altogether it is a very complete and handy volume. C. K. W., JR.

Infant Feeding. By CLIFFORD G. GRULEE, A. M., M. D., Assistant Professor of Pediatrics at Rush Medical College, Chief of Pediatric Staff, Cook County Hospital. Second Edition, Thoroughly Revised. Octavo of 314 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $3 net.

The first edition of this book was reviewed in the ANNALS of February, 1913. A second edition within two years shows its wide popularity.

The subject is one that appeals strongly to the general practitioner and we are fortunate in having a book so well written and so sound in principle. The author is a firm believer in the methods employed by the so-called "German school," and his book describes in a very clear and convincing manner the principles taught by the best known German pediatrists.

The second edition has been revised and a few minor errors corrected. There are no new chapters nor are there any important changes in the context.

The book is divided into four parts; the first dealing with the underlying principles of infants' nutrition; part two with the nourishment of the infant on the breast; part three with artificial feeding, and part four nutrition in other conditions. The title of the chapters in this division gives the best idea of the conditions discussed by the author:

The Premature Infant.
The Exudative Diathesis.
The Spasmophilic Diathesis.
The Nervous Infant.
Infant Feeding in Rickets.
Infantile Scurvy.
Infant Feeding in Eczema.
Congenital Pyloric Stenosis and Pylorospasm.
Infant Feeding in Other Diseases.

This volume is one which can be recommended without reserve to the general practitioner. Its careful perusal and an understanding of the principles outlined will help him in the feeding of the difficult feeding cases met with in private practice. H. L. K. S.

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MEDICAL ANNALS

Original Communications

SOME PHASES OF CARDIO-RENAL DISEASE FROM A THERAPEUTIC STANDPOINT.

Read at the annual meeting of the Fourth District Branch, September 13, 1914, *Gloversville, N. Y.*

BY N. A. PASHAYAN, M. D.,
Schenectady, N. Y.

The pathogenesis of arteriosclerosis and its relation to hypertension and contracted kidney are still mooted questions. No attempt will be made in this paper to enter into such a discussion. The coincidence of cardiopathy to nephritis was well pointed out by Richard Bright in his original communication in 1836. A vast amount of clinical and pathological evidence, since, has accumulated indicating the close interrelation of the heart, blood vessels and the kidneys, so that at present cardio-vascular-renal disease may be considered as a definite symptom complex. It is not well known as yet if hypertension is a precursor or runs *pari-passu* with sclerotic changes in the vessels and kidneys, but it is certain that a disturbance in one field seriously involves the other structures. Pathologically the process consists of vascular induration, sclerosis of the renal tissue, hypertrophy and subsequent degeneration of the myocardium.

While there is an apparent uniformity in the structural changes, the clinical manifestations are extremely variable. Some patients will complain of a certain or a group of symptoms, while others exhibit totally different ones. Furthermore, therapeutic measures beneficial in one group fail to exert a favorable influence on others. No pathological data are as yet available to account for this diversity of symptoms. It may be reasonable to assume that the sclerotic changes are not uniformly distributed throughout the system and the province most affected determines the clinical picture.

In the order of frequency dyspnea perhaps occupies the first place. It is familiar to all how often shortness of breath is complained of by patients suffering with valvular lesions of the heart when decompensation sets in. But the type of dyspnea that we desire to call particular attention to does not belong to this category. Examination of the heart reveals nothing seriously wrong. There may be moderate or excessive enlargement and the second aortic sound accentuated, no incompetency of the valves or arrhythmia are present. The blood pressure is above 160 but not always. Polyuria is frequent but not constant; albumen and casts are occasionally found. The characteristic feature of this form of dyspnea is that while the patient is at rest suddenly he is seized with breathlessness, which may even assume the Cheyne-stokes type and in a few minutes the attack is over and the patient breathes in comfort. It is true at first dyspnea appears on exertion, but once the disease is established the periodic attacks are not dependent on muscular effort alone. The attacks are purely uremic and run parallel with the urinary output. In conjunction with all the eliminative measures at our disposal diuresis is the keynote of treatment. A typical case of this character may be cited:

A man 60 years old, excellent habits, has been a voracious eater in the past. About two years ago he began to experience shortness of breath on exertion, which gradually increased in severity. Three months ago when he first came under observation he was extremely dyspneic, was unable to lie down and had slept but very little. On examination he was found well nourished, heart moderately enlarged and second aortic accentuated. No murmurs, arrhythmia, edema, cyanosis, vertigo or any other subjective complaints. Blood pressure, systolic was 240 and diastolic 120. With the total elimination of the proteids the systolic blood pressure dropped to 160; no change in the diastolic. Nitrites had given him little relief in the past. Digitalis in full doses proved beneficial but had to be abandoned on account of gastric irritation. While taking digitalis, patient himself remarked that he was passing large quantities of urine and he felt easier. Under theobromin, alternated with alkaline diuretics, there has been a steady improvement in his condition. He has been able to undertake a moderate amount of work.

Now and again we are confronted with dyspnea in connection with high blood pressure and definite valvular lesions of the heart, a condition designated by Sahli " Hoch druckstauning."

Is the cardiac decompensation or uremia at fault? What are the therapeutic indications? To illustrate: A machinist, age 38 drank to excess in the past. A few months ago developed shortness of breath that would come and go, worse on exertion. When he first presented himself he was panting; there were general anascara, ascites, enlarged liver and right hydrothorax. Apex of the heart was in the sixth space and at the mid-axillary line. Double aortic and mitral murmurs. Blood pressure systolic was 220, diastolic only 10. Urine scanty and contained albumen and casts. Was his condition due to cardiac dilatation or uremia? He was put to bed, all proteids eliminated, free catharsis induced. He was unable to tolerate digitalis, strophanthus was substituted. The systolic blood pressure dropped to 160 and the diastolic rose to 20. Anasarca disappeared, no reduction in the area of the heart dullness. The ebb and flow of breathlessness continued. Urinary output did not exceed 600 c. c. As long as free diuresis was kept up the dyspnea was in abeyance and the patient made comfortable.

In these cases a matter of great importance is the question of sleep. For days these unfortunate sufferers sit up in a chair or walk the floor without getting a night's rest. A mixture of chloral with ammonium bromide answers the purpose well. At times it may be necessary to add some deodorized tincture of opium as well.

Angina pectoris or anginoid attacks are frequently met with in subjects of cardio-renal disease. The stenocardia may conform to the typical text-book description or appear as a sense of precordial distress and oppression. Excluding cases due to aneurysm there is nothing in the physical examination pathognomonic of the disease. Hypertension is as frequent as hypotension. Dyspnea on exertion is often present. For the relief of the attacks nitro-glycerine is the remedy par excellence, and on its failure morphine is indispensable. In the absence of luetic infection, iodides are useless to prevent their recurrence. Rest, avoidance of mental strain and excitement and small doses of belladonna are of service.

A peculiarity noticed in some cases of stenocardia is the tendency to develop acute attacks of pulmonary edema. How much responsibility could be charged up to the customary administration of iodides in these cases is difficult to estimate. Remembering the views of Jas. Mackenzie as to the causation of angina pectoris, this complication is not easily explained. A rather unusual case, still under observation, pertains to an old man 72 years old. A carpenter, no habits. He has been in poor health for some time. About six months ago he began to experience a feeling of painful constriction in the right hand, which would extend up the arm, right shoulder, then back of the neck and finally locate in the precordium. Peripheral arteries were palpable. Heart not enlarged. Blood pressure, systolic 140, diastolic 80. Nitro-glycerine would invariably give him prompt relief. Soon he developed attacks of acute pulmonary edema, usually at night, when his lungs would fill up with bloody froth, expectorating large quantities of it. Six such attacks took place within a month and each time nitro-glycerine by mouth and atropine subcutaneously cut them short. He was receiving iodides during this period. They were stopped and the attacks have ceased since.

Headache and vertigo, but seldom together, are the only symptoms complained of by some of the patients with cardio-renal disease. Dyspnea, anginal pains, edema do not accompany them. A constant pathologic condition present is the heightened blood pressure. The headaches as a rule are periodic, occur usually in the morning and often assume all the characteristics of true migraine. The most essential therapeutic indication is the elimination of proteids from the diet with regular, at least once a week, free catharsis. In some cases extract of the thyroid gland and in others strychnin have appeared to lessen the frequency and the severity of the attacks. Although hypertension is the most outstanding feature, vaso-dilators do not seem to influence the course of the disease.

Vertigo is the most rebellious to be combatted with. It may appear as a sense of uncertainty of equilibrium or may be severe enough to militate against the patient's walking in safety. With it many sufferers complain of psychic insufficiency, inability to think and plan as customary. Several attempts to reduce the blood pressure by dietary courses were not successful and vasodilators proved distinctly harmful. Notwithstanding the theoretical presser effects, ergot is the only remedy that has seemed to offer some relief. The disorder is evidently due to marked sclerotic changes in the cerebral vessels and it is common to find such evidence by an ophthalmoscopic examination of the retina.

A fourth group of arteriosclerotics exhibit clinically only sensory and neuritic disorders. These combine various paresthesias, numbness, tingling, burning sensations as well as the most violent attacks of neuralgia and neuritis. In these cases other clinical manifestations are lacking. There is generally a moderately high blood pressure, oliguria with an excess of indican. Paresthesias yield as a rule to a purin free diet and diuretics. For the neuralgias and neuritis high frequency currents are very effective. The brachial plexus, the left by predilection, seem to be the favorite seat. If the case has not been a long standing one relief is prompt and lasting. A woman, 48 years old, had suffered with numbness in the extremities for several months, was a hearty meat eater. Three months before coming under observation a severe attack of right-sided brachial neuritis set in. The pain was constant and prevented her from sleeping. All meats and eggs were excluded. Twice a week high frequency currents were applied. For two years she has enjoyed good health.

These are a few of the diverse clinical manifestations of the protean cardio-renal disease. It may appear in motor and sensory paralysis, such as monoplegias, give rise to aphasia, simulats, or produce apoplexy, uremic coma or convulsions and lead up to mental deterioration so well described by Alzheimer.

To summarize: while cardio-renal disease has apparently a uniform pathologic histology, its clinical manifestations are diverse and the therapeutic measures to be adopted differ in important details. The essential principle to be borne in mind is that hypertension is not an indication for its suppression. It is a protective measure adopted by nature, and when it cannot be reduced by regulating the diet it should be left alone. Nitrites have no utility except in aborting attacks of angina pectoris or pulmonary edema. When lues is not a factor iodides are equally useless and may even do harm. Sudden reduction of blood pressure is a bad omen and it often indicates cardiac dilatation and presages edema and hydrothorax. When we meet such reduction and when cardiac decompensation is impending, even in the presence of hypertension, digitalis should be given in full doses. The theoretical presser and cumulating effects of this drug have been clinically established to be without foundation.

A FEW OF THE MORE FREQUENT EAR CONDITIONS.

Read at the Rensselaer County Medical Society meeting, held Tuesday Evening, November 10, 1914.

By JOHN J. RAINEY, M. D.

Attending Surgeon Nose and Throat Department, Troy Hospital.

Mr. President and Gentlemen:

The external canal or meatus is divided into three parts, membranous, cartilaginous and bony. The cartilaginous and bony parts come together forming an angle, therefore, in order to see the whole canal and ear drum, it is necessary to pull the ear upwards and backwards, thus, straightening the canal. The end of the meatus is the tympanic cavity. It can be likened to a room having an anterior, posterior, external, and internal wall, and a roof and a floor.

Posterior Wall. The upper part of the posterior wall leads into a cavity or large cell called the Antrum, which leads into the mastoid process. The Antrum is one of the most constant cells of the body. It is rarely absent. The inner wall of the Antrum has a hard, smooth, yellow prominence, this is the horizontal semi-circular canal. It is a most important landmark. Often a collection of desquamated epithelium which is called cholesteatoma collects in the Antrum after suppuration and by its pressure erodes the horizontal canal and we get a fistula with a resultant circumscribed labyrinthitis. The roof of the Antrum is formed by the tegmen tympani. It is a thin plate of bone separating the Antrum from the middle fossa. It is obvious how easy cholesteatoma can cause a perforation of the tegmen antri into the middle fossa. More than fifty per cent of cases of abscess of temporal lobe come from Antrum suppuration. The lower part of the posterior wall is formed by a compact mass of bone which covers the descending part of the facial nerve.

Anterior Wall. Just opposite the Antrum on the other side is an opening divided into two canals. The upper contains the tensor tympani muscle and the lower part contains the eustachian tube. The tube opens into the nasopharynx opposite the inferior meatus of the nose. The lower part of the anterior wall is formed by the posterior wall of the carotid canal. Surrounding the carotid artery is a venous plexus, Rektorzik's plexus. The carotid is lying very loose in the canal and if one accidentally goes through the wall there comes a venous bleeding as a warning. It is possible for the bony wall to be destroyed by tuberculosis, but here as in operation, the venous bleeding gives warning. Now, on the inner wall of the tympanic cavity is the promotory bone, the shell which covers the cochlea, the organ of sound perception. The posterior wall of the carotid may be a little more in the tympanic cavity. Therefore, the carotid being so near the cochlea we get tinnitus, due to the pulsation of the carotid. The noise is constant. If one presses on the carotid in the neck, the noise stops during the experiment. In doing a paracentesis one need have no fear of the carotid. There is only one case in the literature where the carotid ran through the tympanic cavity without a bony canal.

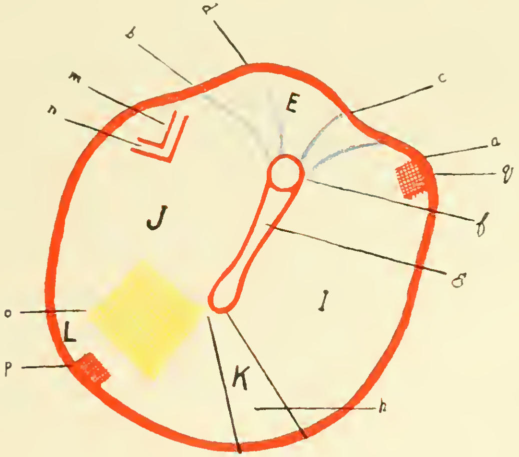
The roof of the tympanic cavity is the same as that of the antrum, the tegmen tympani.

Floor. The floor or lower wall of the tympanic cavity is formed by the groove of the jugular bulb. If deep, it narrows the tympanic cavity from below. If prominent and covered by thin bone, it is possible to injure the bulb during an operation. In the literature there are twenty-three cases where the jugular was injured by paracentesis, there are probably hundreds of cases that have never been reportd. The bleeding following this accident is terrific and hard to check. In packing the ear to overcome it one can't regard the drum, but must go through and take chances on a sinus thrombosis.

Inner Wall. One part of the horizontal canal looks into the tympanic cavity. Right under it we find the horizontal part of the facial nerve. As it is covered by thin bone, it is easily injured by operation, or in the very young by pressure. Under the facial is the oval window the situation of the foot plate of the stapes, which looks into the labyrinth. In snaring a polypos from the ear, there are cases where the stapes was accidentally removed, infection now invades the labyrinth through the oval window and the patient dies of meningitis. Under the oval window is seen a yellow hard smooth bone, it is called the promotory bone. It is the cover of the cochlea. Underneath this, we see the niche for the round window.

And the external wall of the tympanic cavity is the drum. The healthy drum-membrane is gray and transparent. The first thing to look for in examining an ear drum, is the short process of the malleus. The drum is very thin here, and the short process appears almost protruding through the membrane. From this landmark we get our orientation. We can then easily outline the handle or malleus, the rounded tip of which is called the umbo. From the umbo to the periphery goes a ray of light which is called the light reflex. From either side of the short process goes a fold to the periphery, these are called from relative positions anterior and posterior folds. Above these folds go two other folds from the short process to the periphery, called Prussack's folds; which limit the space called Shrapnell's membrane. Shrapnell's membrane and the part over the short process are the thinnest parts of the drum. The part included between the anterior and posterior folds and Prussack's folds are the thickest parts of the drum. The heads of the malleus and incus divide the upper part of the tympanic cavity into the attics; external and internal. The external attic is the important one. In every suppuration of the external attic, Shrapnell's membrane is the typical seat of the perforation. The drum is divided into four quadrants by a line drawn through Shrapnell's membrane, through the umbo to the periphery and a line at right angles from either side just touching the umbo. The quadrants are called anterior and posterior superior quadrant and anterior and posterior inferior quadrants. In the posterior superior quadrant is seen the long process of the incus and the posterior leg of the stapes, when these are present to the vision it is proof positive that absolutely no inflammation of the drum exists. In the posterior inferior quadrant is seen a yellow shadow which is the promotory bone. In otosclerosis this gives a red shadow and is one of the points of diagnosis in this disease. Just on the edge is seen the shadow of the round window. In the anterior superior quadrant is often seen the shadow of the eustachian tube.

The simplest type of ear trouble is catarrh. In all otitis conditions there is an inflammation of the drum and it is bacterial in origin. In catarrhal conditions, there is no inflammation of the drum and it is non-bacterial in origin. There are three types of catarrhal conditions: (1) dry, (2) wet, (3) secretory. Common to all three types, is the retraction of the drum and bad hearing. All cases hear better after Politzer air inflation. The explanation of the retraction is, that the function of supplying air by the tube is shut off and pressure outside the drum and the external canal being greater than within the tympanum, pushes the drum in and the tympanic vessels become congested accounting for the fullness in the ear. In adults the cause of catarrh is acute rhinitis the " common cold in the head," large turbinates, septum deflections, etc. In dry catarrh there is retraction and the drum is gray. In wet catarrh there is moisture in the tympanic cavity and in secretory catarrh there is a collection of free liquid in the tympanic cavity which is amber and transparent and shows a definite line on the drum membrane and changes on moving the head in different directions. If the secretion locks the oval window the hearing is very bad. The treatment consists of air inflation. Catheterization is contra-indicated as it may irritate the tube. If we get no result on air inflation tip the head down to the same side,



a—Anterior fold. *b*—Posterior fold. *c* and *d*—Prussack's folds which limit *e* Shrapnell's membrane. *f* is the short process. *g*—The malleus (declined backwards), the rounded tip of which is the umbo. From the umbo goes (*h* the light reflex,) to the periphery. Dotted lines divide the drum into 4 quadrants. *i*—anterior superior quadrant. *j*—Posterior superior quadrant. *k*—Anterior inferior quadrant. *l*—Posterior inferior quadrant. *m*—Long process of incus. *n*—Posterior leg of stapes. *o*—Shadow of promotory bone, the cover of the cochlea. *p*—Shadow of the round window. *q*—Shadow of the Eustachian tube.

Schematic Drawing of Normal Ear Drum.

so to allow the fluid to run out easily. If no result from this do a paracentesis and air inflation, open through the anterior inferior quadrant, as there is a strong band of connective fibres here, and the opening remains longer. Retraction of the drum in children is proof positive of adenoids, and when adenoids interfere seriously with nasal breathing, the drum membranes are greatly retracted. Immediate removal of the adenoids is indicated.

A catarrhal condition that has not as yet found its way in the books, is known as mucous catarrh, demonstrated but recently by Neuman. The hearing is the same as in secretory catarrh and is worse than acute otitis. A patient doesn't hear the whispered voice, tuning fork tests show middle ear trouble. He complains of deep noises. The drum membrane appears milky and opaque. If the trouble is not treated exactly, adhesions form and a chronic process sets up. For a few years there is not any great change in hearing, but after that, the adhesive changes have done the damage, and the hearing is very bad. The mucus in this catarrh is of a thick slimy character and comes from the eustachian tube as there are no mucous glands in the tympanic cavity. This mucous exudate has a tendency to organize, forms connective tissue and fixates the ossicles. This is the type of case, that escapes attention most frequently, and does not go to the otologist until the hearing is very bad and of course nothing can be done. For a perfect result, they must be seen during the first three weeks of their trouble. Paracentesis is indicated by the diagnosis and should be followed by Politzer air inflation, as the mucus is very thick and will not come out of the cavity otherwise. Dry out this mucus with sterile cotton and put in a wick of sterile gauze in the canal. The patient immediately gets a good result after the operation.

The next condition is traumatic rupture of the drum. It usually occurs on the left side on account of striking with the right hand. It is not necessary to use strong force to rupture the drum, as kissing on the ear will often cause it. Taking a person unawares by closing their eyes with the hands from behind or putting foreign bodies in the ear frequently cause ruptured drum. Never do an air inflation with an athrophic drum, as a rupture of the membrane will occur. All other perforations of the ear drum have round edges, traumatic perforations have sharp edges especially triangular and bloody. There is always one rupture followed by infection and that is in swimming, diving or being struck by a wave. This type of infection often goes to a mastoid inflammation. *The treatment:* When there is no infection do *absolutely nothing,* as any treatment in the ear may cause an infection, have the patient come for control. If no infection the prognosis is good as they all heal up entirely and smoothly within three or four weeks.

Acute Otitis. Is an inflammation of the middle ear, due to the streptococcus or, diplococcus or, streptococcus mucosus. It is always a mono-bacterial infection. Later however, we may get a mixed infection. The typical course: Pain in the ear greatly increasing. In three or four days the drum is greatly swollen and macerated. The details not visible. The bulging mostly on the posterior superior quadrant. The first stage is the stage of serous secretion, it lasts two or three days, then the drum is either opened, or ruptures spontaneously, and we come to the second stage, that of purulent secretion which lasts about two weeks. The patient has no more pain. From the meatus comes thick pus. The patient complains of noises and bad hearing and now, we pass to the third stage, the stage of mucus secretion which lasts about two weeks, his complaint is about the same as the purulent stage, and now he passes to the catarrhal state which lasts about two weeks. The drum is gray, not transparent, hearing is not perfect, patient hears slight noises, has a feeling of fullness in the ear, but in a few days he is perfectly well. Six weeks is the course of an uncomplicated acute otitis. In acute otitis the short process is the last detail to disappear and the first to appear when healing takes place. In the first stage he may have pain in the mastoid region, but this is not significant as Politzer gives a law that in the beginning of every acute otitis there is also an inflammation of all the cavities connected with the ear. It only means something if it is present in the second stage. All operations of acute mastoid trouble are done in the second stage, that of purulent secretion. The very beginning of the first stage, the treatment consists of putting in the ear a three per cent carbolic in glycerine on a gauze wick. If bulging comes and no details present, do a paracentesis. Do it on the most bulging part. The main thing about a paracentesis is speed, employ no local anaesthetic as it does no good. Put in a dry sterile wick of gauze and bandage ear to prevent mixed infection. In acute otitis touch up the external canal with five per cent silver nitrate from time to time to prevent an external otitis. Cleanse the ear frequently with sterile cotton and put in a wick of gauze saturated with Burow's solution as often as necessary. Do not syringe as the condition is often prolonged by this old method. In modern otology syringing of the ear in acute conditions has no place.

The mastoid process consist of three kinds of bone, a pneumatic where there are great air spaces, diploitic small spaces, and sclerotic solid bone. When an acute otitis comes to a mastoid complication there is always a pneumatic bone, seldom diploitic and never sclerotic. If we have spontaneous pain in the purulent stage, it is a mastoid complication or if pain disappears and reappears again it is a sign of a mastoid, redness and edema is diagnostic if over the mastoid. Usually there is no fever in acute mastoid trouble, if fever is present, it may mean sinus thrombosis or dural involvement, children usually have fever. The classical indications for operation are pain on pressure over the mastoid antrum, the tip and the posterior edge of the mastoid, and the dropping of the posterior superior canal wall, all these symptoms appearing in the second or stage of suppuration.

The type of mastoid trouble due to the streptococcus mucosus is most dangerous, the patient has a little pricking pain in the ear for a few days, it discharges for a couple of days, and apparently is all right. If a case happens to be seen in the early stage, the drum membrane is slightly reddened details present, but not distinct, of course we don't see the incus or stapes. *A few months later* complains of a little pain over the mastoid, the mastoid is sensitive to the air, the ear now becomes a sensation organ. If we examine the drum at this stage, we find it intact, and soft, retracted and thickened, hearing is very bad, the condition looks like a catarrh, but operation shows it to be an extra dural abscess. The streptococcus spreads out in a pneumatic mastoid, and as its life is a short one it must do damage in a short time, it doesn't produce any severe inflammation in the tympanic cavity, as it doesn't like a cavity with a mucous membrane, but goes into the bone and develops there. The symptoms come when the disease reaches the sinus or the brain. Mastoid operation is indicated, remove the bone until the healthy dura is reached. The granulations are not touched, if we remove them we may open the blood and lymph vessels and meningitis develop.

Chronic Otitis. The difference between acute and chronic otitis media is, that the acute has a small perforation and non-smelling pus, and chronic otitis has a large perforation, foul smelling pus, or other signs of chronicity, as polypi, granulations, cholestatoma and bone destruction. In acute otitis of children the pus is foul smelling. Only in scarlet fever is produced a large perforation in acute otitis, it has a chronic type from the beginning. The germ tends toward chronicity.

Tuberculosis of the ear is chronic from the beginning. It is always secondary to tuberculosis elsewhere, as is tuberculosis of the larynx. Its chief characteristic is the absence of pain, and the prognosis depends upon the general condition of the body.

Cholesteatoma, scarlet fever and tuberculosis are the ear conditions producing bone destruction.

In conclusion just a word regarding intercranial complications. The danger of intercranial complication is in the retention of pus. The route of infection is usually through the posterior and superior walls. It goes in one of two ways. (1) In an anatomical way, through blood vessels and cavities, (2) In a pathological way, by means of a fistula. In acute otitis the usual complication is in the posterior fossa, because the mastoid is diseased, and as a result get retention in the cells. Labyrinth disease complicates the posterior fossa through the aqueductus cochlearis or vestibule. In Chronic otitis connective tissue develops in the mastoid and it becomes almost solid bone, so there is no place for retention. The pus follows the easiest path and goes through the tegmen tympani to the middle fossa. Sinus thrombosis is of both types, diffuse and localized. One of the most recent advances in otology is that an acute otitis usually goes an anatomical preferential way, and chronic otitis goes a pathological preferential way. The diffuse complication is meningitis, the localized complication is extra dural abscess. This classification is only a recent advance, as if we operate the middle fossa we must do a radical and of course greatly injure the hearing. Now if we have an acute otitis complication, the posterior fossa or sinus is operated first, middle fossa later if necessary and not vice-versa, as was formerly done. The first question we ask ourselves if complication is suspected, has the patient acute otitis or chronic otitis? If acute otitis operate the posterior fossa, if chronic otitis operate the middle fossa.

SECOND REPORT OF THE HEALTH DIRECTOR IN THE PUBLIC SCHOOLS.

By CLINTON P. McCORD, M. D.

(This report is for the period July 1, 1913, to June 30, 1914.)

Dr. C. Edward Jones, *Superintendent of Schools.*

Dear Sir.—I have the honor to submit to you, this, my second annual report upon health work in the schools.

During the summer following the printing of my report on the initiation of the work in Albany, our school nurses made 536 home visits, which resulted in 157 additional medical treatments, 64 pairs of glasses, 56 dental treatments and 28 operations for nose and throat defects. These were cases that were examined in the spring of 1913 but which the nurses found no time to " follow up " because of press of other work, until after the termination of the school term. These results, therefore, raise the level of response to parental notification cards to approximately 47%, for the report covering the period ending June 30, 1913. The plan of " following up " a number of cases in the summer is not the most desirable procedure, as a much higher per cent. of treatments and cures can be obtained where the nurses are free to " follow up " cases with defect within two or three weeks after notification cards have been received by the parents. This is possible only where eye and ear tests are not required of the nurse, thereby leaving a portion of their afternoons free for home visiting.

Let me first refer with satisfaction to the fact that through your wise and constructive policies definite steps have been taken to meet two needs that were so pressing last year when I rendered my first report: (1) measures to relieve the cry of the " special child " for humane and proper consideration in the free school system of a modern city, and (2) the institution of a dental dispensary to supplement in some measure health agencies directed toward improving oral conditions amongst school children. Such a dispensary was founded and a dentist added to our staff on January 9, 1914, and your system of "special classes" for the backward and mentally deficient, so well initiated, has only to be extended to place Albany at the head of the list of cities in the wise policy of making adequate and proper provision in its school system for these unfortunates that heretofore have been an expensive clog and handicap in the regular grades.

In addition to these two institutions, the fresh air idea has been promulgated and has been expressed in the broader policy of educational hygiene with the plans for the start of a system of open-window class-rooms for poorly nourished children. These provisions all bespeak foresight and complete grasp of the lines along which educational systems must advance during the next few years. They are the provisions that will place this city at the front, as a leader, in harmony with the wise and expanding policy of a beneficent State department.

For the school year properly covered by this report the following (in addition to the 536 home visits recorded in our opening paragraphs) are the quantitative tabulations:

Staff: Health Director (full time).
Four school nurses (full time).
Dentist (employed for 100 half days under supervision of Health Director).

Number of pupils registered	13,303
Number of school visits by Health Director	127
Number of school visits by nurses	1,861
Number of home visits by nurses	946
Number of half-days professional service by dentist	69
Number of children receiving routine physical examination at hands of Health Director	2,715

TABULATION (based on the above 2,715 first and fifth grade children).

Defective vision	222
Corrected	31
Defective hearing	24
Corrected	12
Enlarged tonsils	192
Treated	25
Operated	10

Nasal obstruction	26
Treated	12
Operated	1
Poor nutrition	159
Decayed teeth (3 or more each)	1,009
Treated by dentists	101
Treated at dispensary	63
Nervousness	360
Notified	4
Treated	4
Stoop shoulders	902
Lateral curvature	171
Rachitic remains	14
Enlarged glands	189
Speech defect	24
Eczema	140
Notified	3
Treated	3
Miscellaneous conditions as follows:	
Pericranial abscess	1
Cretinism	1
Mongolianism	2
Hare-lip	2
Cleft palate	5
Double club foot	1
Extreme general uncleanliness	1
Habit spasm	1
Chorea	1
Coxalgia (healed)	3
Potts Disease (arrested)	2
Interstitial Keratitis	1
Healed tuberculous knee	1
Number of children whose eyes were tested by nurses	8,962
Notified	688
Glasses secured	163
Number of children whose ears were tested by nurses	8,962
Notified	73
Treated	46
Operated	1
Number of children with discharging ears	18
Treated	11
Number of children with pediculosis	809
Cured	301
Improved	469
No improvement	39

Number of pupils excluded from elementary schools for varying periods of time, with reason for exclusion:

Pediculosis	295
Scarlet fever	26
Diphtheria	20
Measles	31
German measles	45
Mumps	11
Chicken-pox	86
Whooping-cough	59
Tonsilitis and sore throat	75
Contagious Impetigo	35
Scabies	3
Favus	4
Ringworm of scalp	5
Ringworm of body	13
Conjunctivitis (simple)	39
Conjunctivitis (phlyctenular)	3

A special study of the question of school time lost through exclusions for contagious conditions will be rendered in another form at a later date. It is sufficient here to state that an adequate staff of school nurses with regular inspections of groups of children would go far toward further reducing the spread of these diseases, and hence would lessen this waste of school time that is measurable in dollars and cents. As it now is, not a few cases of these diseases sit in the classes, undetected, through the most communicable stages of a disease, thus exposing many non-immune children to infection. We have endeavored to handle the exclusion of "contact" cases by supplying the principals with a definite and concise bulletin which, when rigidly adhered to, saves the Health Director valuable time, and offers the maximum of protection to the pupils where a daily visit by the nurse is not yet possible.

In addition to the foregoing are the following cases seen at the time of the routine forenoon visits to the schools, and spoken of as "miscellaneous cases":

Eczema (all kinds)	172
Acute adenitis	27
Discharging ears	22
Defective hearing	6
Wry neck	5
Epilepsy	5
Wounds and simple impetigo	71
Total	308

Received treatment	254
Emergency treatments	36
Other cases seen by nurses (including headaches, nausea, urticaria, sprains, and pupils sent unnecessarily)	1,173

Second grade children examined for decayed teeth	1,257
Number notified (3 or more decayed teeth each)	631
Number treated (family dentist)	76
Number treated (dispensary)	57

HEALTH CERTIFICATES.

The state medical inspection law gives the parent the privilege of having the family physician make the yearly examination, and for this examination a special health certificate is prescribed. Health certificates were furnished by the parents of 1,247 children in the elementary grades. These have been tabulated in reference to grade, school and section of the city, and the curves plotted. These health certificates were filled out by 136 different physicians and the results are as follows:

Number of children having

Defective lungs	6
Heart lesions	11
Defective glands	100
Hernia	8
Enlarged, cryptic tonsils	276
Frequent sore throat	30
Chronic pharyngitis	38
Adenoids	50
Nasal spurs	28
Digestive disturbances	0
Poor nutrition	2
Poor teeth	119
Other physical defects	79
Communicable disease	2

A detailed, comparative and explanatory analysis of the health certificates will be presented in another form at a later date.

More comprehensive reports will be made later in the form of special studies based upon:

A. EXAMINATIONS OF CHILDREN IN THE UNGRADED SCHOOL.

However, we may here say briefly that over 80% of the 71 children there examined (from both physical and psychological standpoints) were mentally deficient, and should have been cared for in special classes in the schools from which they were committed, leaving the ungraded school entirely for the delinquents and for those excitable types of defective that require in their proper discipline and management unusual skill, moral strength and understanding.

B. Special Classes for Backward and Mentally Deficient Children.

In all, 125 children have received both physical and psychological examination, and 25 additional psychological examinations have been made. For very basic scientific reasons admissions to and transfers from these classes should be made only upon the recommendation of the Health Director, which is the method that you have directed in our system. Fifty-four children have been so committed to these classes during the past year, and have there received training which was suited to their abilities and under which they have been happy and contented. The course planned for this summer for the training within our own school system of teachers for this work is a step that should be productive of much advance in the understanding of the purposes of work with subnormal children, and that other cities might well take to heart from the standpoint of both economy and professional efficiency. I am glad to report that we have completed plans, whereby, in the autumn, a "follow-up" system will be initiated in all special class cases that leave school by reason of passing beyond the compulsory attendance age. We should know what is happening to these unfortunates in order to demonstrate the pitiable failure of all *regular* school methods to fit these children to become properly self-supporting citizens.

C. Open-Air School.

Admissions to and transfers from this school are now made only above the signature of the Health Director. Parental consent is secured on a special blank (after the nurse has made the proper social investigation) in the case of every child placed under open-air treatment. I wish to speak of the good work of Miss Freeman in these investigations, of the courtesy of Dr.

Hawn, Chief of the Tuberculosis Clinic, and of the cooperation of his staff. The child is examined at the clinic and the examiner reports the result to the Health Director on a special blank. An examination always takes place before any child is returned to the regular grades. No child with communicable tuberculosis is admitted to the school. I take it, that with complete examinations of our entire school population, as is required by the state law on medical inspection, a few children with open tuberculosis will be discovered. These children have a definite claim upon the school system, and yet at present we have no place in which they could be accommodated. They would necessarily be forced out and thrown under conditions that would rapidly put them in the incurable class, whereas, they should be given a chance to overcome their disease and at the same time acquire what school life has to offer them. From work in Chicago, St. Louis, New York and other cities, we estimate that there are at *least* 30 such children in the public schools of Albany.

It would seem only wise foresight to seek to continue our relations with the Anti-Tuberculosis Committee in the maintenance of the open-air school in Ash Grove Place, with the idea in mind that it will become the haven for the tuberculous children in our schools, while our proposed open-window class rooms, conducted with relatively little expense, will care for the poorly nourished children.

Miss Geraldine Mullin, teacher in the open-air school, reports the following interesting details:

Number of pupils registered	35
Number transferred	2

The coldest day in the year, when the thermometer stood at ten degrees below zero, six little boys appeared and voluntarily decided to remain until one o'clock. One day in the class room a cup of water became coated with ice in a very short time, and yet the " fresh-air smile " and the wideawake appearance of these children is always remarked by people who visit open-air classes for the first time.

Miss Mullin acknowledges the kindness of Mr. James H. Perkins, formerly of the National Commercial Bank, who sent two large turkeys for the Thanksgiving dinner of her fresh-air family; and also the generous gift of money from Mrs. Albert

Hessberg who wished the children to celebrate her birthday through the happy medium of a party.

Miss Mullin, with the enthusiasm characteristic of successful open-air school workers, says: " No one need feel sorry for us 'way down there in the cold,' as we are very happy. We have adopted as our school motto:

> The thing that goes the farthest
> Towards making life worth while,
> That costs the least and does the most,
> Is just a pleasant smile.

The 'hardships?' The teacher and her fresh-air pupils say—we do not mind them."

With the open-window class room to be opened in School No. 6 in the autumn, and with the proposed provision for fresh-air classes in the new School No. 14, a considerable number of children (just as much in need of this treatment as are those now enjoying it) will reap the benefits that experience in many cities has shown result from this type of school provision.

D. Scope of Work and Proper Administration of the School Dental Dispensary.

I may here briefly state that only cases that have been properly investigated and certified by the nurses as unable to pay for dental work are given admission cards. Complete records are kept of all cases. The work has been confined to children of the first and second grades, excepting a few emergency cases—abscesses; or in severe toothache, when palliative treatment has been given.

With one dentist, working three afternoons a week for approximately 33 weeks, it obviously would be impossible to handle all children requiring treatment, even by confining the work to the first two grades. It has therefore been the policy to reach the children with decaying "six-year" molars—the most important teeth of the permanent set. Ninety-two per cent. of the children treated since the opening of the dispensary have had these important teeth saved for them—thereby preventing faulty eruption of the other permanent teeth with the facial deformities that frequently result.

Number of half-days dental dispensary was operated	69
Number of children examined	143
Number of cases completed	82
Number cases partially completed	61
Number operations (including treatments, fillings, extractions and draining of abscesses)	1,023

Our hearty thanks are due to Drs. Canaday, Sr., Blatner, Allen and Van Loan for their invaluable help in the selection and installation of equipment, and for their sympathy and advice at all times in furthering the cause of oral hygiene.

Of the work and personality of Dr. James Canaday, Jr., I cannot speak too highly. His excellent training and professional spirit together with his remarkable skill in handling young children, make him an ideal man for a school dental dispensary surgeon.

The need for an extension of the dental work is very evident. Hundreds of children still suffer from the lack of attention that an increased dental force could render.

At the beginning of the year a most satisfactory arrangement was effected with Dr. Arthur Sautter, the city Health Officer, for an exchange of reports each morning by telephone on the subject of contagious diseases.

This real and effective cooperation means uniformity in the matter of exclusion from school because of these diseases, and this, together with the satisfactory bulletin that has been worked out through our cooperation, plus the Health Officer's efficient stand in the matter of diphtheria "carriers" that we exclude from school, leads us to feel that the relations between this office and that of the city Health Officer are such as make for the very highest and most effective professional management of a phase of public health work that is "at loose ends" in many cities.

During the year 133 "cultures" were taken and several "carriers" were excluded from school, thereby aborting epidemics of diphtheria, or at the very least, saving many children from direct and prolonged contact with disseminators of the disease.

Emergency cabinets with supplies for "first-aid" work were installed last autumn in every school, including two in the high school, and the principals and teachers were given talks on the equipment and its uses.

Double filing cabinets were also installed in all the schools, and the physical examination records of the children are there in alphabetical order. We must appreciate the fact that this record is as much a rightful item in the child's school life as is his report of school progress and attendance, and should be considered in conjunction with these records if justice is to be done the pupil. These cards should be transferred with the other records of the child when he leaves any particular school.

I wish to express appreciation of your policy of having the Health Director and certain of the nurses attend state and national conventions and meetings along the lines of their work.

Our two nurses who were sent to St. Louis last April brought back "things worth while." Miss Bridgeford read a paper there which subsequently attracted no little interest. During the year the Health Director has given 23 lectures along school health lines before various audiences, and three talks have been given by nurses in certain schools. The Health Director has had visits from 24 physicians of the state who are engaged for the first time in school medical inspection and who came to talk over plans for their work. He also has had quite a heavy correspondence with school health workers and educators of this and a number of states in reference to details of our work in Albany.

We have also compiled the age-record cards and have tabulated the over-age children for the entire school system. Eleven pairs of glasses have been purchased for children who were unable to buy them, and whose dispensary prescriptions showed them badly in need of this relief.

We have received a gift of some old gold in the shape of eyeglass frames from one of the teaching force, and one dollar in money from an anonymous source, toward buying a pair of glasses for some child.

Our library along school health lines has been added to and some needed psychological apparatus has been purchased.

Thanks are rendered to the Director of Vocational Training for his response to our need for form boards for our examinations and for use in the special classes, as well as for the emergency cabinets which were also made in the vocational school.

We also wish to point to the excellent cooperation that has existed between our nurses and the Attendance Officers. We have felt their help especially in dealing with certain flagrant cases of pediculosis.

A very comforting phase of our relations with the local health department has rested upon the fact that Dr. Charles K. Winne, Jr., Medical Officer to the Health Officer and Dr. Guyer, Deputy Health Officer, have investigated suspected cases of contagious disease in homes where no physician was employed, and thus we have learned definitely of the nature of the illness and the necessity for exclusion of " contact " children.

The newly organized work of the Physical Director is a correlated force of great value. The future holds much for school health through the cooperation which Mr. Hill stands ready to extend.

The Society for the Cooperation of Charities, through its efficient secretary, Miss Breed, has frequently been an agency of assistance in dealing with certain cases.

In summarizing let me be brief:

The children of the first and fifth grades have been examined by the Health Director; 1,247 children have been examined by their family physicians; 8,962 children have had eye and ear tests made by the nurses; 125 children have received both physical and psychological examination; 143 children have been handled in the dental dispensary; special studies have been made of over-age children and of truants and delinquents; emergency cabinets have been installed in all the schools and filing cabinets have been filled with the physical record cards of the children; a plan for dealing with contagious diseases in the schools has been initiated with the cooperation of the local health department: open-air work has been systematized; 1,988 school visits were made by nurses and Health Director and 946 home visits achieved by the nurses; 133 throat " cultures " were made and several diphtheria " carriers " excluded; 753 children with parasitic and contagious diseases were located and excluded from contact with other children until cured; teachers receiving regular appointments have had physical examinations by the Health Director and fourteen teachers were thus examined during the year; 906 children received treatment, were operated upon, or had their eyes refracted by Albany physicians, for defects of which parents were notified through this office.

RECOMMENDATIONS

1. The state law on medical inspection requires an annual examination of every child. We have an enrollment of approximately 13,000 children. Health certificates have been furnished by less than ten per cent. of the pupils, with indications that a much smaller response will come in the autumn. The working unit in medical inspection as recognized throughout the country, —as apparent from the past year's work in Albany and as indicated by the State Education Department, consists of one doctor and two nurses for each three thousand children. Our dental dispensary occupies one nurse for three afternoons a week and the special classes might well occupy the rest of her time. I therefore recommend that there be added to our staff five nurses (employed for the same time as are those now with us) and four physicians to be employed for three hours each afternoon during the school year, or as many days as are necessary to complete the work indicated by the Health Director, said physicians to be paid for the number of afternoons actually engaged in such work. This would enable us to comply with the state medical inspection law.

2. Extension of open-air and special class facilities as rapidly as is consistent with good administration.

In thinking over the positive results of the year's work I am led to feel that they have been possible because of the cordial response of principals and teachers, the cooperation of physicians and dispensary chiefs (several of whom have been particularly kind and encouraging), the interest and generous sympathy of a number of public-spirited parents, and the support of many others that are enlisted in the various welfare organizations or are interested as individuals in the health and happiness of children. Of the nurses upon whom has rested so much of the routine work that counts for results in the system, I cannot speak too highly. Their patience, tact, attention to detail, and spirit of earnestness and loyalty mark them as exceptional and invaluable workers in this field. To all these people I render thanks.

To you, as Superintendent, for the inspiration of your constructive policies and for your kindness and wise counsel at all times I am most grateful.

Respectfully submitted,
CLINTON P. MCCORD, M. D.,
Health Director.

Dec. 4, 1914.

Editorial

> "I went yesterday morning to my London physician. He sounded me, pushed out his mouth and pulled down his nose, recommended avoidance of excitement. 'Is it heart?' I said. He said it was heart. That was the best thing an old woman could hear. He said, when he saw I wasn't afraid, it was likely to be quick; no doctors, no nurses, and daily bulletins for inquirers, but just the whites of the eyes, the laying-out, the undertaker and the family vault. That's one reason why I went to see Steignton before the blow that may fall any day, whether my brother Rowsley 's there or no. But that Olmer doctor of mine, Causitt, Peter Causitt, shall pay me for being a liar or else an ignoramus when I told him he was to tell me bluntly the nature of my disease."
>
> *Lord Ormont and His Aminta.* GEORGE MEREDITH.

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Veronalism.

The *Wiener klinische Wochenschrift* of October 29, 1914, is dedicated to the jubilee of Privy Counsellor, Professor Dr. J. H. Wagner R. v. Jauregg, Physician-in-chief of the Niederoesterreiches Landesirrenanstalt at Vienna.

Several important contributions upon various phrases of neurological and mental disturbances are included in this exceedingly interesting publication. Among them is a contribution upon chronic veronalism by Dr. Otto Glaser, which is timely and important in that some light is thrown upon the effects of the habitual use of this drug. Cases of acute poisoning by veronal are not unknown, but the effects of its habitual use have not been widely studied and definite knowledge has not been had, general opinion resting upon a rather vague impression of chronic debility.

Dr. Glaser reports one case in full which pointed to some definite facts. The patient began with small doses, and these were rapidly increased until he consumed three grams a day, for hypnotic purposes, and later found himself in a condition of nervous unrest, irritability and loss of capacity for work. After three years alarming symptoms on the part of the vestibular apparatus suggested some organic brain disease, and these were associated with defective mental action, disturbances of writing and reading, and motor symptoms, the clinical picture approximating that of a lesion of the vestibule and cerebellum. The discovery of the habit and the detection of veronal in the urine suggested the cause, and led to the belief that this particular group of symptoms was pathognomonic of veronal poisoning and of value in the differential diagnosis. Trional has something of the same effect upon the mechanism for equilibrium. In a case of acute trional poison there was rotary astigmatism toward the right and left, with a slight tendency upward; the limbs of the left side were strongly everted and the trunk was turned toward the left and backward; there was a positive Romberg symptom toward the left side and backward; the caloric reaction was typically exaggerated, and this susceptibility of the cerebellum and vestibule to trional was plainly evident. Chronic abuse of sulphonal results in constipation and dyspepsia, anemia, urinary suppression with hematoporphyrin, albumen and casts, pseudoparalytic symptoms, vertigo, mental stupor and depression, somnambulism, hesitating speech and stammering, tremors, increasing motor and sensory paresis of the extremities and the trunk, associated with partial reaction of degeneration and involvement of the sphincters. The symptoms of trional and sulphonal poisoning are also to some extent characteristic of the effect of veronal, but differ in that disorders of the kidneys and pronounced disturbances of the circulatory apparatus are wanting. The digestive tract is less severely affected, although in acute conditions colic pains, vomiting and loss of appetite may be seen. The most pronounced symptom involves the central nervous system, and is especially prominent in disorders of the cerebellum and vestibular apparatus. There may be tinnitus, vertigo, staggering to the point of falling, sometimes in a definite direction, ataxia, and the eventual development of a condition resembling alcoholic drunkenness. In some cases there are tremors, diminished tendon and superficial reflexes, motor weakness, staring gaze, glistening eyes, neuralgias and paresthesias. In many cases are definite disturbances of speech, which may be dragging, lisping or stammering, and the handwriting assumes a paralytic type. The writer observed epileptiform seizures in two cases.

The amount of veronal to produce these results is estimated from one-half of a gram to three grams a day, continued over a period of from two months to six years, although naturally the exact amount needed to produce these results in an individual case cannot be determined. Under proper treatment the restoration of health is usually rapid and without unpleasant manifestations. There was only one fatal case in the series reported by the writer, and death here followed an acute prostration from an overdose taken with suicidal purpose.

From these observations the following definite conclusions may be stated:

The habitual use of veronal in small doses may result in a more or less severe condition of chronic intoxication.

The symptoms following the abuse of all hypnotics of the urea group are most manifest in the function of the central nervous system, especially in the effects upon the cerebellum and the vestibular apparatus.

The digestive tract and circulatory apparatus usually escape.

Euphoria and easy habituation to continued use, as well as a peculiar inhibition upon excretory action of the kidneys and intestinal tract, substantially favor the appearance of symptoms of intoxication.

As a result of the chronic abuse of veronal, especially in neuropathic and psychopathic subjects, symptoms of constitutional mental disorders of a more or less active type may ensue.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, DECEMBER, 1914.

COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

Deaths.

Consumption	23
Typhoid fever	2
Scarlet fever	1
Measles	0
Whooping cough	1
Diphtheria and croup	1
Grippe	1
Diarrheal diseases	6

Pneumonia	8
Broncho-pneumonia	6
Bright's disease	11
Apoplexy	17
Cancer	9
Accidents and violence	7
Deaths under one year	16
Deaths over 70 years	36
Total deaths	170
Death rate	18.19
Death rate less non-residents	16.15

Deaths in Institutions.

	Resident	Non-Resident
Albany Hospital	6	15
Child's Hospital	0	1
County House	1	4
Home for the Friendless	0	1
Homeopathic Hospital	1	4
Hospital for Incurables	1	3
Little Sisters of the Poor	0	4
Public Places	1	3
St. Margaret's House	1	1
St. Peter's Hospital	4	7
Maternity Hospital	1	2
Labor Pavilion	0	2
Albany Hospital Camp	2	3
Totals	18	50

Births	174
Still-births	8

TUBERCULOSIS.

Bender Laboratory Report on Tuberculosis.

Positive	11
Negative	41
Total	52

Living cases on record December 1, 1914		371
Cases reported:		
By card	25	
Dead cases by certificate	7	
		32
Total		403

Dead cases previously reported	16	
Dead cases not previously reported	7	
Removed	3	
		26
Living cases on record January 1, 1915		377

Total tuberculosis death certificates filed during December	23
Non-resident deaths:	
Albany Hospital	1
Resident deaths	22

Report of Visiting Tuberculosis Nurse.

Old cases	9
New cases	27
Returned from hospitals	3
Total	39
Disposition of cases:	
Died	3
Sent to hospitals	11
Left town	1
To general tuberculosis nurse	5
Remaining under treatment	19
Total	39

Visits made	20
Visits made, old cases	100
Calls at Board of Health office	29

BUREAU OF CONTAGIOUS DISEASE.

Cases Reported.

Typhoid fever	5
Scarlet fever	25
Diphtheria and croup	8
Chickenpox	34
Measles	2
Whooping-cough	3
Tuberculosis	32
Total	109

Contagious Disease in Relation to Schools.

	Reported	
	D.	S.F.
Public School No. 4		2
Public School No. 5		1
Public School No. 6		1
Public School No. 16		1
Public School No. 18		2
Public School No. 22		1
Public School No. 24		1
St. John's School		1
High School		1
Boys' Academy		1
St. Patrick's Institute		1
St. Ann's School		1

Number of days quarantine for diphtheria:
Longest....... 26 Shortest....... 9 Average....... 14 8/9
Number of days quarantine for scarlet fever:
Longest....... 41 Shortest....... 30 Average....... 34 7/20
Fumigations:
Houses.................. 56 Rooms.................. 248

Cases of diphtheria reported	8
Cases of diphtheria, antitoxin used	8
Cases of diphtheria, antitoxin not used	0
Deaths after use of antitoxin	1

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria.

Initial positive	16
Initial negative	171
Release positive	12
Release negative	109
Suspicious	5
Total	313

Test of Sputum for Tuberculosis.

Initial positive	11
Initial negative	41
Total	52

BUREAU OF MARKETS AND MILK.

Public market inspections	6
Market inspections	52
Fish market inspections	1
Rendering house inspections	1

Packing house inspections	2
Hide house inspections	3
Slaughter house inspections	1
Dairies inspected	3
Milk houses inspected	3
Milk houses deficient	1
Milk depots inspected	12
Milk depots deficient	3
Milk wagons inspected	22
Cows examined	67
Milk cans inspected	86
Milk cans unclean	12
Milk cans condemned	3
Sediment tests	11
Lactometer tests	24
Temperature tests	24
Fat tests	7
Chemical tests	5

Miscellaneous.

Work certificates issued to children	9
Number of complaints of nuisances	38
Privy vaults	1
Closets	2
Plumbing	16
Other miscellaneous complaints	19
Number of dead animals removed	266
Cases assigned to health physicians	73
Calls made	166

Medical News

Edited by Arthur J. Bedell, M. D.

Albany Guild for the Care of the Sick.—Department of Visiting Nursing.—Statistics for December, 1914.—Number of new cases 204; classified as follows: Dispensary patients receiving home care, 10; district cases reported by health physicians, 7; charity cases reported by other physicians, 80; moderate income patients, 83; metropolitan patients, 24; old cases still under treatment, 202; total number of cases under nursing care during month, 406. Classification of diseases for the new cases: Medical, 31; surgical, 8; gynecological, 5; obstetrical under professional care, mothers 47, infants 48; infectious diseases in the medical list, 65. Disposition: Removed to hospitals, 23; deaths, 20; discharged cured, 100; improved, 26; unimproved, 8; number of patients still remaining under care, 229.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 2; students in attendance, 2; nurses in attendance, 4; patients carried over from last month, 1; new patients during month, 6; patients discharged, 6; visits by head obstetrician, 3; by attending obstetrician, 5; by students, 45; by nurses, 48; total number of visits for this department, 101.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 1,334; for professional supervision of convalescents, 613; total number of visits, 1,947; visits to pay cases, 708; to charity cases, 626; unrecorded visits, 613; cases reported to the Guild by 3 health physicians, and 40 other physicians; graduate nurses 8, certified nurses 1, pupil nurses 7 on duty.

Dispensary Report.—Number of clinics held, 87; new patients, 138; old patients, 362; total number of patients treated during month, 500. Classification of clinics held: Surgical, 12; nose and throat, 8; eye and ear, 14; skin and genito-urinary, 7; medical, 12; lung, 9; dental, 0; nervous, 3; stomach, 4; children, 11; gynecological, 7.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY.—The regular meeting of the Medical Society of the County of Albany was held at the Elks Club, 138 State St., Thursday evening, January 14, 1915, at 8.30 P. M.

A Symposium upon Carcinoma of the Stomach was presented as follows: "Diagnosis and Medical Treatment," Dr. Jerome Myers; "Skiagraphic Diagnosis and Lantern Slide Demonstrations," Dr. J. M. Berry; "Surgical Treatment," Dr. E. A. Vander Veer. Discussion opened by Dr. L. H. Neuman. An address with demonstrations on "Radium and Radioactive Substances; their production and use," Dr. C. Everett Field, Pittsburg, Pa.

MEDICAL SOCIETY OF THE COUNTY OF SCHENECTADY.—The regular meeting of the Medical Society of the County of Schenectady was held at the County Court House on Tuesday evening, January 12, 1915, at 8.30 P. M.

Scientific programme: "Obstetrical Service: The Relation of the General Practitioner and Obstetrician to It and to Each Other," Dr. Paul T. Harper, Albany, N. Y. Discussion of Dr. Harper's paper led by Dr. H. A. Kurth and Dr. L. Faust. "The Compensation for Medical Services Rendered to Workmen Under the Employers' Liability Act. The Viewpoint of the Commission," Dr. Frederic Loughran, New York City. Discussion of Dr. Loughran's paper led by Dr. W. P. Faust, Dr. George P. Harran, Dr. A. B. Van Vranken, Dr. C. G. McMullen and Dr. D. R. Kathan.

MEETING OF THE MEDICAL STAFF, ALBANY HOSPITAL.—A regular meeting of the Medical Staff of the Albany Hospital was held in the Library of the Medical College on Saturday, January 16th, at 5.00 P. M.

SARATOGA SPRINGS MEDICAL SOCIETY.—The regular meeting of the Saratoga Springs Medical Society was held at the Elks Club, Saratoga, on Friday evening, January 15, 1915, at 8.30 P. M.

Dr. C. Everett Field of New York City read a paper on "The Efficiency of Radio-Active Waters for the Treatment of Faulty Elimination" which was discussed by Dr. William H. Cameron of Pittsburgh, Pa.

NEW YORK PHYSICIANS' MUTUAL AID ASSOCIATION.—The forty-sixth annual meeting of the New York Physicians' Mutual Aid Association was held at the Academy of Medicine, New York City, on Tuesday, January 19, 1915, at 4.00 P. M.

EPIDEMIC OF DIPHTHERIA.—The nine public schools in Hoboken and the public library were closed the middle of December because of the rapid spread of diphtheria, and 9,000 students, including those in the high school, were started on their Christmas holidays two days ahead of time. One hundred cases were reported in six days.

COUNTY TUBERCULOSIS HOSPITALS.—At a recent election, three additional counties, Chenango, Lewis and Suffolk, voted to establish tuberculosis hospitals. There are now twenty-nine counties in the State which either have or have planned for such hospitals. It is also reported that Nassau County, L. I., finds that the vote in favor of a tuberculosis hospital near Hempstead, L. I., must stand in spite of the objections of residents in that neighborhood.

NEW YORK SOCIETY OF ANESTHETISTS.—The following resolution was recently passed at a regular meeting of the New York Society of Anesthetists:

Resolved, That it be the sense of the New York Society of Anesthetists that the administration of a general anesthetic by any one other than a regularly qualified practitioner of medicine be not allowed; and that the County and State Societies be asked to press legislation to this end and, further, that this action by the New York Society of Anesthetists be published in all the State Medical Journals.

EXAMINATION OF CANDIDATES FOR ASSISTANT SURGEON.—Boards of commissioned medical officers will be convened to meet at the Bureau of Public Health Service, 3 "B" Street, S. E., Washington, D. C., and at the Marine Hospitals of Boston, Mass., New York, N. Y., Chicago, Ill., St. Louis, Mo., Louisville, Ky., New Orleans, La., and San Francisco, Cal., on Monday, March 8, 1915, at 10 o'clock A. M., for the purpose of examincandidates for admission to the grade of assistant surgeon in the Public Health Service, when applications for examination at these stations are received in the Bureau.

Candidates must be between 23 and 32 years of age, graduates of a reputable medical college, and must furnish testimonials from two responsible persons as to their professional and moral character. Service in hospitals for the insane or experience in the detection of mental diseases will be considered and credit given in the examination. Candidates must have had one year's hospital experience or two years' professional work.

Candidates must be not less than 5 feet, 4 inches, nor more than 6 feet, 2 inches, in height.

The following is the usual order of the examinations: 1, Physical; 2, Oral; 3, Written; 4, Clinical.

In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify them for service in any climate and that they will serve wherever assigned to duty.

The examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercise consists of examination in the various branches of medicine, surgery, and hygiene.

The oral examination includes subjects of preliminary education, history, literature, and natural sciences.

The clinical examination is conducted at a hospital.

The examination usually covers a period of about ten days.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order. They will receive early appointments.

After four years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon.

Assistant surgeons receive $2,000, passed assistant surgeons $2,400, surgeons $3,000, senior surgeon $3,500, and assistant surgeon generals $4,000 a year. When quarters are not provided, commutation at the rate of $30, $40, and $50 a month, according to the grade, is allowed.

All grades receive longevity pay, 10 per cent. in addition to the regular salary for every five years up to 40 per cent. after twenty years' service.

The tenure of office is permanent. Officers traveling under orders are allowed actual expenses.

For invitation to appear before the board of examiners, address "Surgeon-General, Public Health Service, Washington, D. C."

DIED.—Dr. HERCULÉ DANSEREAU (A. M. C. '53), died at Thibodeaux, Louisiana, January 2, 1915, aged 82 years.

—Dr. JOHN A. MACPHERSON SMITH (A. M. C. '55), died at Albany, N. Y., January 25, 1915, aged 82 years.

—Dr. ABRAM DEGRAFF (A. M. C. '58), Guilderland, N. Y., died at his home in that village, January 1, 1915.

—Dr. CHARLES T. MONTGOMERY (A. M. C. '74), died at Saugerties, N. Y., January 15, 1915.

—Dr. HORACE R. POWELL (A. M. C. '82), of Poughkeepsie, N. Y., died December 30, 1914.

—Dr. WILLIAM J. SHEEHAN (A. M. C. '97), died in New York City, January 14, 1915.

—Dr. JOHN M. ADEY (A. M. C. '99), died at his home in Cohoes, N. Y., December 26, 1914.

In Memoriam

JOHN WILLIAM MORRIS, M. D.

Dr. JOHN WILLIAM MORRIS was born in Greenwich, Washington County, N. Y., August 27, 1859. He attended the public schools of Troy, afterward spent three years at Selleck School at Norwalk, Conn. Four years in the office of Dr. Reed Brockway Bontecou followed, during which he attended the Rensselaer Polytechnic Institute, for special courses in botany, and the Albany Medical College, from which he was graduated in 1881.

He took up practice in Troy, N. Y., and was for many years an attending physician at Marshall Sanatorium. He was a member of the medical staff of the Troy City Hospital, consultant at The House of the Good Shepherd and a member of the New York State Medical Society and American Medical Association. He married Mary Agnes Thacher, a daughter of ex-Mayor George H. Thacher of Albany, in 1891. There were five children, Gabrielle Mary Thacher Morris, died in 1894; John Thacher Morris, Helen Rowe Morris, George Howell Morris, Virginia Morris and his wife survive. JOHN J. MC SHANE.

JOHN M. ADEY, M. D.

Dr. JOHN M. ADEY was born in Cohoes in the year 1874, and was a resident of this city all his life. His early education was acquired here in the public schools. He graduated from Egbert's High School in 1891. Later he entered the Albany Medical College and received his degree in the spring of 1898. In the earlier days of the establishment of the Cohoes Hospital he acted as its interne, and rendered valuable service and contributed by such service in assisting in bringing the hospital into the high and efficient place which it now holds in the community. He was an alumnus of the Albany Medical College, of the Class of 1899, and a member of the Albany County Medical Society. He was Registrar of Vital Statistics for many years, and his work was of so high a character that he received the commendation of his chief at the State Department.

Dr. Adey was of a genial and kindly disposition, and enjoyed the confidence of all. About six years ago he was operated upon for brain abscess, which nearly terminated his career at that time. Since then he has been a constant sufferer from nervous trouble and headache, which he bore with a fortitude which was surprising in one whose physique was never of the robust type. For this reason also, in the later years of his life, he was compelled to confine himself more to his office work, specializing in nose and throat practice, in which he was highly successful. In 1909 he married Anna Elizabeth Bedford, a graduate of the Cohoes Training School for Nurses, who proved a loving helpmeet to him in the last years of his suffering. J. H. MITCHELL.

Frank Arthur Searle, M. D.

Dr. Frank Arthur Searle, a graduate of the Albany Medical College of the Class of 1914, died at the Albany Hospital January 20, 1915, of malignant endocarditis. Dr. Searle came to Albany from Southampton, Mass., after an academic course in Williston Seminary. He graduated with honor and accepted an appointment as interne in the Albany Hospital, where he established a reputation for careful and conscientious work. His services there were acceptable in every way, and his pleasant personality endeared him to his associates. His death is most to be regretted and creates a sense of loss in his comrades who enjoyed association with him and had anticipated for him a successful career.

John A. Macpherson Smith, M. D.

Dr. Macpherson Smith, son of the late Peter and Margaret Macpherson Smith, died January 25, 1915, after a long illness. He was born in Albany, March 16, 1832. He was a student in the office of the late Dr. James McNaughton and graduated from the Albany Medical College with the Class of 1855. A few years later he gave up the practice of medicine and began a business career in New York, returning to Albany in 1903, where he has since lived. He was unmarried and leaves two nieces in Scotland, and a nieces and three nephews in Albany.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

Diseases of Bones and Joints. By Leonard W. Ely, M. D., Associate Professor of Surgery, Leland Stanford Junior University, San Francisco, Cal. Surgery Publishing Company, 92 William St., New York City. 1914.

Dr. Ely states in the preface of his book that it is intended primarily for the general practitioner, and that the subject is presented as briefly as possible. A good share of the work is devoted to the discussion of pathology; the comprehension of which, as pointed out by the author, is a prerequisite for treatment.

The book contains 218 pages of subject-matter and is divided into nine chapters, the titles of which are as follows: Anatomy, Physiology and Pathology; Acute Arthritis; Chronic Arthritis, Type I.; Chronic Arthritis, Type I, continued; Chronic Arthritis, Type II; Ankylosis; Diseases of the Shafts; Chronic Inflammations in the Bone Shafts; New Growths in Bone.

The text is elucidated by ninety-four illustrations and many marginal annotations in red ink. J. M. B.

Collected Papers by the Staff of St. Mary's Hospital (Mayo Clinic) for 1913. Octavo of 819 pages, 335 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $5.50 net.

It is exceedingly fortunate that the papers published by the members of the staff of the Mayo Clinic are each year collected into a single volume, thereby bringing together the wealth of observation and experience had in this greatest of all clinics and making it possible to follow closely the work done there without the necessity of perusing all of the current literature. This last volume, containing the papers published or presented in 1913, measures quite up to the standard set by the previous volumes. As usual we find more papers, twenty-six in all, devoted to the alimentary tract than to any other part of the body, and of these papers those dealing with various phases of gastric ulcer and cancer are the most numerous, the gall bladder and appendix being much less in evidence. Thirteen papers deal with the urogenital organs, several of these being on various phases of surgical disease of the breast. As might be expected, the ductless glands receive very considerable attention, there being fifteen papers on subjects of this character and most of them dealing with some phase of the goiter question, in which their experience has been so large. Eleven papers are on various conditions of the Head, Trunk and Extremities. On Technic there are eight papers, and the volume concludes with five papers of a general character. In this volume there are more papers on medical subjects than in any of the preceding volumes, which is an evidence of the broadening character and scope of the work of this clinic. There is so much of value to the physician and surgeon in this volume that no medical library will be complete without it. A. W. E.

Child Training as an Exact Science. By GEORGE W. JACOBY, M. D. With full bibliographical and thorough index. 384 pages, 15 full-page illustrations. Funk & Wagnalls Company, Publishers, New York. $1.50, net; by mail, $1.62.

This book presents in a lucid style a mass of facts and deductions which should prove of great value to the pedagogue. The first two-thirds of the book are devoted to the foundation upon which the author's conclusions are based. This foundation is comprised of an historical survey of the psychological aspects of pedagogy; a brief outline of the fundamentals of psychology; a short study of the mental development of the normal child; a chapter on the organic disorders of children, which affect their mentality; and a chapter on fundamental disorders which check the normal growth of the child's mind and body. The conclusions and opinions contained in the latter third of the book are not only interesting but are of real value to teachers. The author seems much impressed with the methods of Dr. Montessori and others of the ultra modern movement, and argues for the training of the child in the line of natural bent. Dr. Jacoby, like nearly all authors on child mentality, is obsessed with the problem of the feeble-minded. We have been accustomed to training children without regard to their individualities. The time is here when educators are more desirous of developing particular capabilities as the basis of a successful later life, and on these grounds the author no doubt feels justified in the use of the phrase "Exact Science" rather than "Empirical" for the successful conduct of this new science of bringing up the child in the way he *would* go. The educator is encouraged to call in the services of the alienist, psychologist, hypnotist, psychotherapist, physician and surgeon. We are encouraged to abolish *a priori* theories and without bias to seek freedom from artificial methods.

"As applied to pedagogy it means that the methods of instruction deduced from the natural laws of the child's development enables us, notwithstanding a limited brain capability, to augment man's efficiency so as to fulfil the demands made by cultural progress and to do this without overtaxing the normally constituted child." JAS. S. DE F. HOLLENBECK.

The Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. Published bi-monthly by W. B. Saunders Company, Philadelphia and London.

The August, October and December numbers of the Clinics continue the presentation of interesting and more or less unusual cases at the clinics of the Mercy Hospital. It is quite impossible to review the different subjects treated in the discussions of different phases of these cases. The general standard of the work has, however, been maintained and these volumes are a decided contribution to the case teaching system which has taken the place of the old didactic lecture. Perhaps more attention is paid to the surgery of bones and joints than to any other general subject, largely probably because of the special interest which Dr. Murphy has taken in this class of cases for the past few years. These volumes have the advantage of presenting the experience and observation of a single individual in an attractive manner and form a decided addition to current surgical literature. The illustrations are carefully selected and well executed and add materially to the value of the volumes. A. W. E.

MEDICINE

Edited by Samuel B. Ward, M. D., and Charles K. Winne, Jr., M. D.

A Comparison of the Results of the Phenolsulphonephthalein Test of Renal Function with the Anatomical Changes Observed in the Kidneys at Necropsy.

William S. Thayer and Roy R. Snowden, *The American Journal of Medical Sciences, Vol. CXLVIII, No. 6, December,* 1914.

The writers point out that most of the reports upon the results obtained by the use of the phenolsulphonephthalein test of renal function as devised by Geraghty and Rowntree are based entirely upon clinical observations. They have therefore undertaken a study of a series of fatal cases upon which the 'phthalein test was made during life and in which there had been a necropsy after death with careful microscopic study of the kidneys. In this study an anatomical classification of the material was first made independent of the clinical histories. The latter were then carefully analyzed and the results of the 'phthalein tests were then considered in relation to the anatomical changes in the kidneys and to the conditions existing clinically at the time when the tests were made.

The material studied consisted of fifty-four cases which were anatomically classified as follows:

Advanced chronic nephritis,	20 instances.
Chronic nephritis of moderate extent,	6 instances.
Cloudy swelling in association with grave acute infections,	6 instances.
Severe acute nephritis,	1 instance.
Amyloid kidney,	1 instance.
Hypernephroma (unilateral),	1 instance.
Chronic passive congestion (cardiac disease)	20 instances.

Chronic nephritis, advanced. The anatomical changes here observed were those of a progressive chronic inflammatory nephritis with more or less granular atrophy in gross, and microscopically, adhesive glomerulitis, hyaline glomeruli, a greater or less amount of interstitial change —infiltration, œdema, scarring. Acute terminal changes—hæmorrhages, exudate, cellular infiltration, epithelial swelling, and degeneration—varied in extent.

In these twenty patients, thirty-three estimations of the 'phthalein output gave figures varying from 0 to 38 per cent in two hours. The test was made within a week before death in eleven cases and in only two was there a larger figure than 18 per cent given; these were cases who died respectively of a dissecting aneurysm and a hemiplegia, accidents coming on in the course of a nephritis which had not as yet reached a stage of decompensation. In all the thirty-three tests there were only three which gave figures larger than 36 per cent; these were in the two cases referred to and in one other who died from myocardial insufficiency. In the latter case the test made eighteen days before death gave 16 per cent.

The manner of death in all these patients except the three referred to was from uræmia. The urine in all was of low specific gravity, contained a moderate amount of albumin, and was scanty towards the end, though there was usually a history of a previous polyuria. The sediment was, as a rule, scanty, consisting of hyaline and granular casts and occasionally red blood cells.

The maximum blood pressure was high in almost every instance. The one case in which it was low was in an anomalous case of nephritis in a child. In this case the low 'phthalein percentage was the chief factor in enabling a correct diagnosis to be made a few days before the patient died in uræmic coma. At autopsy a marked atrophic nephritis was found.

Relation of the percentage of 'phthalein excreted to the length of survival. The percentage excreted in two hours was 20 or over in 9 tests, 6 cases; longest survival, eight months. Percentage from 10 to 20 in six tests, six cases; longest survival, four months. Percentage under 10 in sixteen tests, 12 cases; longest survival, seventy-two days. The percentage was a trace only in seven tests, 4 cases; longest survival, seventy-two days. The 'phthalein was wholly suppressed in four tests, 4 cases; longest survival, five days. The writers point out that these results are quite in accord with those with which they have met in the clinic during the past few years in cases which have not come to autopsy. The combined experience of all the workers at this clinic along these lines shows that the test has a great diagnostic significance, as in no instance of grave chronic nephritis have they failed to find a marked diminution in the 'phthalein excretion. The above figures further reveal in a rather striking manner the progressive diminution in the excretion with an advance in the disease, and thus gives it a considerable prognostic value as well.

Chronic nephritis of moderate extent. There were six such cases, five of which were associated with a high degree of chronic passive congestion from cardiac failure.

The renal changes in these cases were not extensive and the kidneys showed little gross deformity. The urine in all cases was scanty, but with a specific gravity tending to be below normal. The albumin varied from a trace to a considerable amount.

The 'phthalein output in two hours varied from 16 to 42 per cent. In the one case in which it was made within a week before death the percentage was 16.

The blood pressure in this series was not strikingly high, due perhaps to the condition of the heart. On the whole the group represents older persons than those in whom more advanced nephritis was found, persons whose weakened hearts were less able to withstand the hypertension of an advancing nephritis. Death has, therefore, occurred from circulatory failure at an earlier period in the course of the renal disease.

Cloudy swelling. There were five instances of cloudy swelling occurring during severe infections. The microscopical changes in the kidneys were not extensive,—swelling and granular degeneration of the epithelium, engorgement of the capillaries, with the occasional escape of a few red blood cells into the glomerular spaces or tubules. The urine was rather scanty in all of the cases, of normal or high specific gravity, the albumin and casts varying from a slight amount to a very large amount.

The percentage of 'phthalein excreted in two hours varied from 20 per cent on the day of death to 50 per cent forty-five days before death. The test was made within two weeks before death in three instances, the excretion percentage of 'phthalein varying from 20 to 29 per cent.

The writers consider from their figures that a terminal cloudy swelling is associated with considerable diminution in the 'phthalein output.

Severe acute nephritis. There was one such case associated with ulcerative endocarditis, septicæmia and multiple infarcts. Blood pressure 135. Kidneys large, with swollen cortex and pale parenchyma, and microscopic evidence of grave acute nephritis. The 'phthalein excretion, four days before death, was but a trace in four hours.

Amyloid kidney. There was one such case, associated with old syphilis and extreme anæemia. Blood pressure 92 to 124. Urine scanty, moderate albumin, S. G. 1012 to 1015, with occasional hyaline casts. Patient died in coma.

Ten days before death the 'phthalein excretion was but 1.2 per cent in two hours, and two days before death it was but a trace.

Hypernephroma. In one case a large irregular tumor was palpable in the right renal region. The ureters were catheterized, and from the right side no 'phthalein was obtained; from the left, 17 per cent was excreted in fifteen minutes. The left kidney was found to be hypertrophied; the right was almost entirely destroyed, consisting largely of neoplastic tissue.

Chronic passive congestion. There were twenty instances in which the kidneys anatomically showed changes suggesting only chronic passive congestion. Clinically these were all cases of cardiac dilatation and insufficiency.

In these cases the 'phthalein excretion varied greatly according to the degree of cardiac compensation, ranging from a trace to 71 per cent. In nine cases the percentage excreted was under 20 per cent. In all there was grave cardiac decompensation. The nature of the change was as follows: In four cases syphilis of the aorta with aortic insufficiency and its sequels. In four cases fibrous myocarditis with dilatation. In one case fibrous myocarditis associated with chronic endocarditis and mitral insufficiency.

Four of these cases are very interesting as showing the great variations which may occur in one individual under varying circumstances. During decompensation the 'phthalein output was very low but later, when compensation was again established, or at least when the patient was temporarily better, the output increased, even to as high a figure as 60 + per cent.

The urine in these cases was scanty, and of normal or increased specific gravity. There was a trace of albumin and a few casts. The blood pressure in these patients, most of whom showed cardiac hypertrophy as well as dilatation, varied considerably but was in general high.

On the whole the 'phthalein figures showed a moderate decrease in the percentage excretion, a diminution which at times was extreme, amounting almost to a complete suppression. This is wholly in accord with previous experimental work.

Other tests for renal function were used in many of the cases cited in this paper, but were found to be far inferior in value and consistency of results to the 'phthalein test.

Artificial Pneumothorax.

G. B. Webb, G. B. Gilbert, T. L. James, and L. C. Havens. *The Archives of Internal Medicine, Vol.* 14, *No.* 6, *December,* 1914.

This report deals first with the writers' experience with artificial pneumothorax, in eighty-three patients with advanced pulmonary tuberculosis, and secondly with a series of gas analyses and animal experiments to determine the relative benefit from the use of air or nitrogen in the pleural cavity.

The series of cases they divide into the following groups:

I. Complete failure to find the pleural space (owing to extensive adhesions), 21 cases.

II. Advanced cases, usually with cavity. Involvement of other lung not serious, 25 cases.

1. Remarkable benefit, loss fever, sputum, cough, etc,	18
2. Some general benefit,	6
3. Very slight benefit,	1
4. No benefit whatever,	0

III. Far advanced; other lung involvement more serious, 29 cases.

1. Great benefit,	7
2. Fair degree of benefit,	5
3. Very slight benefit,	8
4. No benefit whatever,	9

IV. For hæmorrhages, 3 cases.
    1. Hæmorrhages ceased but patient died later of other complications.
    2. Completely successful.
    3. Hæmorrhages ceased although very little collapse was obtained.
V. Lung abscesses (secondary to foreign body), 2 cases.
    1. Apparent complete cure.
    2. Death due to bad general condition.
VI. Lung tumor (for diagnosis and relief of pain), 1 case.

Among special incidents noted by the writers in connection with this series may be mentioned the following:

In two cases an X-ray examination revealed a mistake in the diagnosis as made from physical findings. In each case what had been considered as an apical cavity was shown on the plates to be the trachea pulled to one side by apical fibrosis.

Such retraction of the trachea to one side may signify adhesions at the apex which will prevent collapse of that part of the lung should artificial pneumothorax be attempted.

Within twenty-four hours of the first application of pneumothorax, spontaneous and complete pneumothorax followed in three patients. Fortunately this did not result fatally in any case though for a short time there were alarming symptoms present. The writers feel that this is a possible danger which has hitherto not been sufficiently emphasized.

In their series the left lung needed collapsing much more frequently than the right.

Over 900 injections of gas or air were successfully given.

A slight case of probable air embolism occurred once. Unconsciousness and stertorous breathing occurred for a few moments and the next day a transient weakness of one hand was noticed.

An appreciable amount of fluid developed late in the treatment in 10 cases or 16 per cent. This usually lessened or disappeared after partial tapping.

This fluid became purulent, but culturally sterile, in three of the cases.

Two patients who refused the application of pneumothorax, and whose conditions appeared hopeless without attempting the remedy, and two in whom the writers were unable to produce it, were later in excellent condition, walking several miles each day, and with almost complete absence of expectoration.

Experience showed that the compression should be kept up for probably several years. One patient after apparently complete recovery for two years began to have fever again as a result of too infrequent recompression. Hæmorrhages recurred eight months later in one patient who had only allowed the compression to be kept up three months.

The necessity of keeping up the compression over a long period of time is a serious drawback, as is also the possible annoyance to the patient of the development of fluid. For the present every other known method should be very thoroughly tried out before suggesting this method to patients.

As a result of the writers' gas analyses and animal experiments, they conclude that little if any advantage is to be gained by the employment of nitrogen rather than atmospheric air for the compression, as, owing to the rapid diffusion of gases, analyses of the gaseous content of the pleuræ made from twenty-four to forty-eight hours after the injections gave practically the same figures as to O, CO_2, and N percentages.

Clinically, the amount of gas necessary to produce and maintain a pneumothorax varied greatly in individual cases and seemed more dependent upon the size of the chest, the extent of the adhesions, and the rate of diffusion through the tissues of the individual than upon the nature of the gas used. Though the rate of absorption in individual cases seemed to be a law unto itself, yet, on the whole, it might have been necessary to use a trifle less nitrogen than air.

As to the ultimate composition of the gas in the pleura, in general it might be said, that the longer the time between injections, the higher was the percentage of carbon dioxide and the lower the percentage of oxygen, the former tending to reach 10 per cent and the latter from one per cent to zero. The immediate tendency was for the composition of the gas to assume the composition of the alveolar air, equilibrium probably being established through the mediastinal pleura from the alveolar air of the opposite lung.

Among the conclusions which the writers have drawn from their study are the following:

In severe chronic nephritis there is a uniformly low 'phthalein output which, as a rule, in those instances, not interrupted by an acute terminal process, decreases steadily up to the onset of uræmia, and is nearly or wholly suppressed from a day or two to a month before death. Acute terminal processes which may be unsuspected clinically, are common, and here a sudden diminution in the elimination of 'phthalein may come on in cases where the percentage previously excreted is not so low as to appear menacing.

In not a single instance, and indeed not once in all the studies of the past five years, have we met with a case of severe chronic nephritis with a good 'phthalein elimination.

Chronic passive congestion (cardiac disease) results often in a considerable reduction in the amount of 'phthalein excreted in the two hour period. These results are very variable in the individual cases. In marked decompensation the output may be reduced to but a trace in the two hours; but the excretion is, as a rule, rapidly restored with the reëstablishment of circulatory compensation.

The cloudy swelling observed in acute infections was in some instances associated with considerable reduction in the 'phthalein output.

In the few instances of chronic nephritis of moderate extent which are included in this series the 'phthalein excretion was uniformly considerably reduced. All of these cases, however, were associated with chronic passive congestion of considerable extent, but the percentage of 'phthalein was lower than might have been expected with an uncomplicated passive congestion.

The Etiology of Splenic Anaemia or Banti's Disease, Preliminary Note.

J. L. Yates, C. H. Bunting, and H. T. Kristjanson. *The Journal of the American Medical Association, Vol. LXIII, No. 25, December* 19, 1914.

This article is a report of a continuation and extension of the writers' very interesting and very important work upon the etiology of Hodgkin's disease, which they have been carrying on for the past three years and upon which they have made several reports.

From two spleens removed surgically in the treatment of splenic anæmia they have obtained pure cultures of diphtheroid organisms identical with or closly related to their *Bacillus hodgkini,* which they obtained from the enlarged lymph nodes in cases of Hodgkin's disease. The diagnosis of splenic anæmia or Banti's disease was confirmed histologically.

Inoculation of dogs and rabbits was made with the cultures obtained from the second case and with the culture obtained from a Hodgkin's lymph-node. In each case there were produced changes that were characteristic of the disease as described by Banti.

These findings appear significant in view of the recent report by Gibbons of his finding in stained sections of six cases of splenomegaly Gram-staining streptothrichal organisms, at times segmented and at times appearing as bacillary forms.

The writers point out the following clinical evidence in support of their conclusions that splenic anæmia or Banti's disease and Hodgkin's disease are closely related, if not only variations in manifestations of a single type of infection:

Atrophic cirrhosis of the liver, as a complication of the more usually accepted glandular variety of Hodgkin's disease, has been often observed but is relatively infrequent. Earlier stages of periportal connective tissue overgrowth have been frequently seen. This rarity of advanced cirrhosis in "Hodgkin's" is probably due to the fact that life is, as a rule, insufficiently prolonged. In anæmia splenica the first stage usually lasts for from three to five years. This difference in duration, and in addition the relatively greater concentration of toxins in the portal circulation in Banti's disease, may explain why atrophic cirrhosis is a constant terminal feature in the latter condition.

In the clinical course of splenic anæmia there is the constant alternation of periods of progression and retrogression which are also noted in Hodgkin's disease. Also in both diseases is noted recurrent fever.

Banti himself recognized that splenic anæmia might be accompanied by enlargement of the lymph-nodes in the later stages, and that the histological changes in the spleen in the two diseases were similar. He thought it possible to regard "anæmia splenica as a pure form of pseudoleukæmia splenica" (Hodgkin's disease). In other words, Banti's disease might be regarded as Hodgkin's disease of the spleen.

NEUROLOGY

Edited by Henry Hun, M. D.

The Clinical Aspects of Syphilis of the Nervous System in the Light of the Wassermann Reaction and Treatment with Neosalvarsan.
HENRY HEAD and E. G. FEARNSIDES. *Brain, Vol. XXXVII, Part* 1, 1914.

A Comparison of the Lesions of Syphilis and "Parasyphilis," together with Evidence in Favour of the Identity of these Two Conditions.
JAMES McINTOSH and PAUL FILDES. *Brain, Vol. XXXVII, Part* 1, 1914.

This issue of *Brain* is complete with the two above-entitled contributions. In the article by Head and Fearnsides certain early symptoms of syphilitic infections are emphasized in order that management of the disease may begin before the appearance of structural changes. The effect of the poison in the central nervous system differs as it reaches different structures, and the essential distinction between syphilis and para-syphilis lies in the fact that in the former there is more active disturbance of the meninges, whereas in the latter some deeper structures are involved. It would be possible then to discuss "syphilis meningovascularis" and "syphilis centralis," thus doing away with the term parasyphilis.

It does not appear that the Wassermann reaction is necessarily negative in the former type of disease, although this has been generally held. The researches of Head and Fearnsides lead them to believe that the character of the Wassermann reaction in the cerebrospinal fluid in cases of meningo-vascular syphilis depends mainly on the site of the lesion. If the signs and symptoms point to an infection of the spinal cord, its membranes or nerve roots, the reaction is usually positive in the cerebrospinal fluid, and the strength of this reaction is often as great as that in any other condition of syphilitic origin; but the more completely the clinical manifestations are confined to the infection of the cerebrum or its vessels the more often is a negative reaction obtained in the cerebrospinal fluid. In infections of the cranial nerves the cerebrospinal fluid sometimes give a positive and sometimes a negative reaction. Thus, the key to the Wassermann reaction in the cerebrospinal fluid lies in the presence or absence of inflammatory changes in the meninges of the spinal cord and brain stem. If they are affected the reaction is positive, whilst if they have escaped the cerebrospinal fluid reacts negatively.

In this class of cases active and early treatment brings about a change in the Wassermann reaction, and in many cases of meningo-vascular syphilis a strongly positive reaction becomes negative in the cerebrospinal fluid following active treatment.

In syphilis centralis conditions are entirely different, for there is great difficulty in reaching the focus of disease in general paresis and locomotor ataxia by the remedies now in use. The arsenical compounds, such as salvarsan and neosalvarsan, do not enter the structure of the central nervous system in any effective quantity. In this lesion the cerebrospinal fluid is little, if at all, affected by treatment. The pathological condition is one of degeneration of the intrinsic structure of tracts and nuclei, with proliferation of the neuroglia. Individual tracts once involved proceed to complete destruction, and this represents the damage done by the disease. The special structure having been completely destroyed and no new elements having become involved, the progress of the disease is checked naturally, and this explains the limitations of progress and the appearance of quiescence in the progress of spinal and cerebral forms of syphilis centralis.

The important lesson of the clinical signs is that they reveal the site of the lesion and not the nature of the process producing it. It is in many cases impossible by bedside examination to determine whether the patient is suffering from dementia paralytica or syphilitic encephalitis. If he be suffering from the cerebral form of meningo-vascular syphilis great improvement may follow upon treatment, whereas in syphilis centralis, which phrase may be substituted for dementia paralytica, he is doomed to progressive and inevitable mental decay.

The investigations of this contribution are summarized as follows:

(1) All manifestations of syphilis of the central nervous system are consequent on the direct activity of the *Spirochae pallida.*

(2) The clinical picture evoked depends on the situation of this activity and on the susceptibility of the tissues.

(3) When the lesion lies mainly within the essential structures of the central nervous system both neuroglia and the nerve elements participate in the tissue-reaction. This results in the death and degeneration of certain systems of cells and fibres; to these secondary consequences may be due the greater part of the clinical manifestations.

(4) The more closely clinical signs and symptoms point to pathological changes in the meninges and vessels, the more certainly will the disease yield to adequate treatment.

On the other hand, the more nearly the clinical manifestations point to one or more foci of syphilitic activity within the parenchymatous tissues of the central nervous system, the less will they yield to the present methods of anti-syphilitic treatment.

(5) In syphilis meningo-vascularis the character of the Wassermann reaction in the cerebrospinal fluid depends upon whether the spinal or basal meninges are affected. Should clinical evidence point to affection of the contents of the spinal canal, and occasionally when the basal meninges alone appear to be affected, the reaction is positive in the cerebrospinal fluid. When, however, the disease seems to be limited to the intracranial contents, the reaction in the cerebrospinal fluid tends to be negative or weakly positive.

(6) In cases of syphilis centralis, such as dementia paralytica, tabes dorsalis, muscular atrophy and primary optic atrophy, the Wassermann reaction in the cerebrospinal fluid is strongly positive as long as the disease is active. When, however, it has come to an end, leaving behind it a greater or less amount of irreparable degeneration, the Wassermann reaction may diminish in strength or even become negative in the cerebrospinal fluid.

(7) Under treatment with salvarsan or neosalvarsan, the Wassermann reaction in cases of meningovascular syphilis, if at first positive, will usually become negative in the cerebrospinal fluid within six months.

On the other hand, the more the clinical manifestations point to syphilis centralis the less they will yield to any of the present forms of anti-syphilitic treatment.

(8) Thus no complete diagnosis or prognosis can be made until the patient has been under observation and treatment for at least six months, and the cerebrospinal fluid has been systematically examined from time to time.

(9) It is essential to employ a standard serological technique, such that the Wassermann reaction can be estimated quantitatively.

(10) Whatever the situation and nature of the lesion which is responsible for the clinical manifestations, some secondary degeneration must almost certainly result. Many of the signs and symptoms of syphilitic disease of the central nervous system are therefore not amenable to any form of anti-syphilitic treatment.

(11) It is, therefore, most important to make the diagnosis of syphilis early in disease of the central nervous system, so that treatment may be employed before the advent of these secondary changes.

McIntosh and Fildes show that there is no essential difference of syphilitic lesions in the three stages. They all contain the *Spirochaeta pallida*, but the tertiary processes differ in that they are caused by a much smaller number of spirochætas. The difference, in fact, is largely due to the selection by the virus of the interstitial or the parenchymatous tissues. In the former the reaction is marked, and there are proliferation and infiltration with slight degeneration; when the parenchyma is attacked the reaction is trivial and the degeneration extensive.

There are two main types of lesions: first, the focal, represented by the papule and the gumma, in which the virus is perivascular and exerts its effect chiefly upon the interstitial tissues, and, secondly, the diffuse, in which the intoxication falls upon the parenchyma.

The ultimate result of these two varieties of lesion upon the integrity of the organ will be entirely different. The interstitial lesion need produce no notable symptoms and derange no important function; with suitable treatment it may entirely resolve. It is, however, quite different in the case of the parenchymatous lesions. If the intoxication proceeds beyond the narrow limit of repair, the cells will degenerate, and with them will be lost the special function of the organ. Under these circumstances the treatment, which was efficient in dealing with the interstitial lesion, will be without avail. The symptoms will be occasioned not by the presence of syphilis, but by the absence of the parenchymatous tissue. This loss of function, well illustrated by the sterility following a parenchymatous orchitis, is irreparable.

The most pronounced distinction in the past between so-called parasyphilis and syphilis has been the futility of antisyphilitic treatment in the former. From this arose the inference that some other toxin had been evolved from the other syphilitic infection. A better explanation of this, however, is that the symptoms of dementia paralytica and tabes dorsalis arise from degeneration of nerve elements situated in the central nervous system, and as such elements have no power of regeneration no remedial measures can prevent the progress of the degeneration to the furthest limits of the neuron. The apparent progress of the lesion is clearly due not to a spirit of degenerative progress from neuron to neuron but to a continued activity of the primary intoxication which leads to the secondary degeneration, in fact to a continuation of the syphilitic inflammation in spite of treatment.

The brain contains no arsenic after intravenous injections of salvarsan, although if the arsenic does obtain access to the brain, as happens when the drug is inserted into the cerebrospinal canal, immediate symptoms of poisoning are apparent. The injection of "salvarsanized serum" into the cerebrospinal fluid has been advocated in the treatment of parenchymatous lesions of the brain, the fluid being selected on the assumption that this is the normal route of entry into the brain, while the "salvarsanized serum" is preferred to the crude drug because it is said to be less toxic and to be endowed with special therapeutic properties. That the serum has a certain therapeutic effect is probable since it contains small quantities of salvarsan, but whether these small quantities of arsenic in the serum give any advantage over an equivalent quantity of crude neosalvarsan is certainly not proved. As shown by Wechselmann, traces of neosalvarsan may be injected intrathecally without harmful results, but when the quantity is increased for the purpose of attaining a more satisfactory therapeutic dose toxic symptoms arise. As in the case of other serous cavities, drugs are rapidly absorbed from the subarachnoid space and can thus directly affect the brain; when neurotropic drugs such as strychnine are administered by this route, in order to obtain the same effect as by other methods it is necessary to diminish the dose considerably. In the case of salvarsan, intravenously injected, the organotropic action is small, and therefore the quantity injected may be increased in order to obtain a maximum parasitotropic effect. The conditions are, however, different in the subarachnoid space. Here the drug is highly organotropic, and the "dosis maxima bene tolerata" is so small that its parasitotropic effect is trivial.

McIntosh and Fildes are of opinion that the intrathecal injection of salvarsanized serum or neosalvarsan in its present form can have no permanent vogue. They conclude: The progressive character of "parasyphilitic" lesions is due to a continuation of the syphilitic process in spite of treatment, and not to a progressive primary degeneration of the neurons. The degeneration passively extends to the limits of the neuron, but does not actively spread to other neurons. Treatment is ineffective in resolving the inflammation because drugs in the bloodstream are unable to pass from the capillaries into the nervous substance in order to destroy the spirochaetes. If by some method salvarsan succeeds in penerating into the brain or cord, it produces such toxic symptoms as make its use impossible.

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PATHOLOGY OF EXOPHTHALMIC GOITRE.

Read before the Medical Society of the County of Albany, December 17, 1914.

By ELLIS KELLERT, M. D.

Exophthalmic goitre never occurs without pathologic lesion of the thyroid gland. This is the most constant finding in Graves' disease and may be associated with other changes, such as enlargement of the lymphatic system and an enlarged thymus with lymphocytosis. As a terminal condition, the heart is found dilated and hypertrophied, and there are present fatty changes in the liver and kidneys. In the extreme cases of exophthalmos, the bulging of the eyes may be so pronounced that corneal ulcers and even panophthalmitis may result, owing to the incomplete closure of the lids. Almost invariably the thyroid gland shows enlargement and microscopical changes which are so constant that attempts have been made at various times to associate with this condition, a specific pathological lesion.

Normally, the thyroid gland consists of numerous follicles varying in size and not communicating with each other. The lobules of each lobe are separated by connective tissue rich in blood vessels, and continuous with the sheath surrounding the whole gland. The follicles are round, or tubular, and may be branched. The acini are lined by cuboidal epithelium, in which the secretion is found as minute granules. The colloid material enters the lymph vessels by rupture of the acini, or by passing out between the cells. A simple goitre presents a similar, but much more accentuated condition. The acini are greatly dilated, and filled with deep staining colloid containing a variable number of red and white blood cells, and desquamated epithelium. The cells lining the follicles, owing to the presence of the accumulated colloid, become greatly flattened. Focal areas of hyperplasia may be present. The cut surface of such a gland is mucoid or gelatinous in appearance.

Ewing, in 1906, made a thorough study of the histology of the thyroid gland in Graves' disease and came to the conclusion that no definite statement as to the pathological changes to be found will fully accord with the facts. Briefly stated, it was found that in simple goitre there is an excess of colloid; in exophthalmic goitre there is an excess of cells. Between these two conditions there is no sharp borderline and very frequently in the extreme types of Graves' thyroid there may be found colloid material, but this is rare.

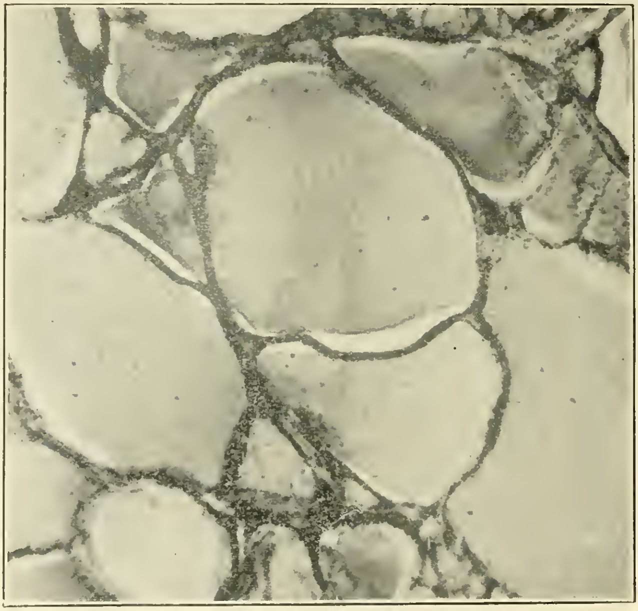

Fig. 1.—Colloid goitre showing dilated acini and flattened epithelium.

In Graves' disease the pathological process may involve one lobe or the whole gland. The affected portion is dull red in color and firm in consistency. The lobules are distinct and the absence of the usual gelatinous areas is quickly noted. Occasionally, circumscribed nodules, hemorrhages, and cysts are found; more rarely, areas of calcification. The blood vessels are prominent and the veins dilated. Microscopically, this condition is characterized by an extensive hyperplasia of the epithelium with papillary projections into the lumina of the follicles. These are usually small and imperfect in outline. The lining cells are more columnar in type and are often stratified. Giant cells may be present.

Occasional epithelial cells are narrow and shrunken, mitotic figures are frequent. Extensive desquamation of epithelium is often seen. This may be due to handling of the gland, although Bloodgood associates this appearance with severe symptoms. The colloid material is absent, or scanty in amount and pale staining. Lymphoid nodules occur in all typical cases, and the capsule and trabeculae show numerous lymphocytes. Wilson, of the Mayo clinic, after a study of over 1,200 exophthalmic thyroids, believes that in eighty per cent. of cases, one may determine the clinical condition, from the pathological examination. The relationship

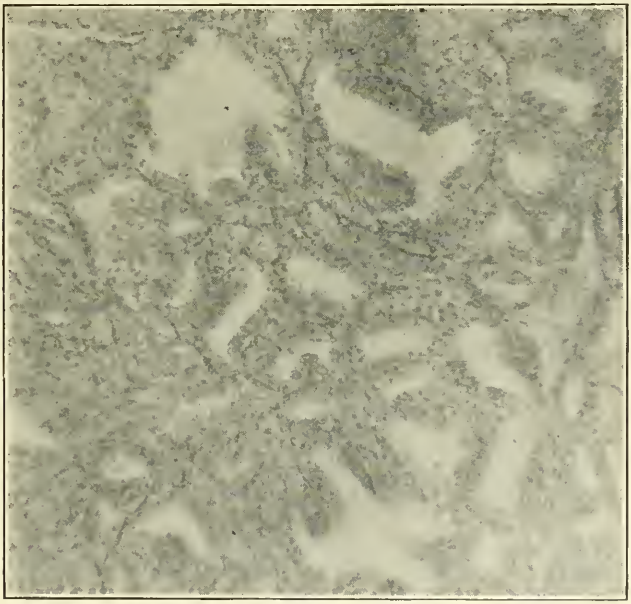

Fig. 2.—Exophthalmic goitre showing absence of colloid and marked increase of secreting epithelium.

between hypertrophy and hyperplasia of the thyroid gland and true exophthalmic goitre is remarkably constant. Less than one per cent. of cases coming to operation fail to show this pathologic condition.

In classifying the pathological changes, difficulty has been experienced, owing to the indefinite clinical diagnoses. Non-toxic cases have usually been diagnosed simple goitre and many cases not true exophthalmic, yet toxic, have been diagnosed exophthalmic goitre, particularly in those cases where the eyes happened to be normally prominent. Plummer found that practically all cases of clinically true exophthalmic goitre showed glandular hypertrophy and hyperplasia and of these cases he formed two groups, the exophthalmic toxic and the non-exophthalmic toxic. Ten per cent. of exophthalmic goitres show encapsulated adenomas. These structures are circumscribed and consist of numerous acini lined by cuboidal, or columnar epithelium. The lumina are small or absent. These adenomas, containing an increased number of acini, supply the gland with a larger amount of working tissue.

In examining our records for the past few years, I find that the pathological changes agree fairly well with the clinical history. The specimens showing marked glandular hyperplasia and absence of colloid material were always from cases of true exophthalmic goitre. More often there was seen a combination of hypertrophy and hyperplasia in which it was more difficult to classify the condition. These cases in which a large amount of colloid is still present are probably border-line conditions, in which a simple colloid goitre is gradually passing into the exophthalmic type. A great deal depends upon the portion of the gland from which the section is derived. Some parts show pure hyperplasia, other parts hypertrophy, and still other areas show a combination of both these conditions.

In conclusion, we find that Graves' disease is characterized by a more or less constant lesion. There is loss of colloid associated with marked glandular hyperplasia. It is this increased amount of secreting parenchyma which gives rise to the symptoms. A lymphocytosis of twenty-five to fifty-eight per cent. is often present, although these figures are not corroborated by statistics from the Mayo clinic. Cases coming to necropsy show dilatation and hypertrophy of the heart, with fatty changes in the liver and kidneys. Those cases that die directly after operation invariably have an enlarged thymus.

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THE PHYSIOLOGY AND PATHOLOGICAL CHEMISTRY OF EXOPHTHALMIC GOITER.

Read before the Medical Society of the County of Albany, December 17, 1914.

By ARTHUR KNUDSON, A. B.,

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CHEMISTRY OF THE THYROID.[1]

There can be little doubt that the thyroid owes its specific action to the constituents of its secretion, the colloid. The " active principle " of the gland is unknown and there are no direct pharmocologic or chemical means of testing the value of the thyroid preparations apart from actual clinical trial.

In 1895 Baumann discovered the presence of iodine in the gland and called the substance thyroiodine. The chemical nature of thyroid colloid has been studied particularly by Oswald.[2] He found that all the iodine is dissolved out by physiological salt solution, none of it is present in inorganic form. In the salt solution extract there are two protein bodies, one contains all of the iodine and seems to be a globulin. The other is a nucleoprotein and contains no iodine. The iodine containing substance he called thyreoglobulin, and it constitutes about one-fourth to one-half of the dry weight of the gland. It seems to be the sole active constituent of the colloid, at least administration to animals has the same physiological effect as does the entire colloid (great increase in urea elimination and decrease in blood pressure in animals) while the nucleoprotein is without these effects.

Analysis of thyreoglobulin from various animals is quite constant except for the iodine. Normal human thyreoglobulin contained 0.34 per cent iodine, thyreoglobulin from goitrous districts contained 0.18 to 0.19 per cent, from calves born with goiter a thyreoglobulin was obtained containing no iodine. Administration of iodides to patients cause increase in the iodine in thyreoglobulin. Oswald believes the thyreoglobulin as first secreted by the glandular epithelium is free from iodine and that it combines with iodine from circulating blood. It has not been ascertained how the iodine is bound to protein molecule. Thyreoglobulin is not simply an iodized protein for iodized proteins artificially prepared show none of the physiological activity of the thyreoglobulin. Furthermore iodized protein contained 5 to 12 per cent of iodine while thyreoglobulin contained 0.3 to 0.8 per cent of iodine.

Oswald has shown that iodine is not bound to tyrosine as it can be removed by tryptic digestion without decreasing the amount of iodine in the rest of the molecule, possibly the iodine is bound to the phenylalanine. By decomposing thyreoglobulin (by boiling with 10 per cent sulphuric acid) a body is obtained which contains as much as 14.5 per cent iodine. This is Baumann's thyroiodine which gives no biuret reaction, yet is physiologically active. The stability of this active constituent of thyreoglobulin explains the successful administration of thyroid preparations by mouth. It appears to be absorbed unchanged and none appears in the urine.

The amount of iodine in the thyroid is greatest in middle age, greater in females than males, and is decreased in acute infectious diseases and in tuberculosis, alcoholism, and circulatory disturbances.

The thyroid is rich in lipase, catalase and peroxidase. Extirpation is followed by decrease in these enzymes in the blood while thyroid feeding increases them as well as the antitrypsin.

The physiological activity of thyroid preparation according to nearly all investigations is in direct proportion to the iodine content which is the best evidence that this compound is one of the chief functions of the gland and that the iodine in the thyroid is not merely stored there as an undesirable foreign substance. Marine and Lenhart[3] find that the normal human gland contains an average of 2.17mg iodine per gram of dry weight. Wells[4] from thyroids from various parts of America found 2.10mg, per gram of dry weight. Seidell and Fenger[5] have found a marked seasonal variation in the thyroid iodine of animals, there being about three times as much between June and November as between December and May. In man it has been found before birth that the fetus contains little or no iodine. The cells of the gland contain very little iodine.

Functions of the Thyroid.

The thyroid has marked influence upon metabolism and also may be of importance in preventing autointoxication, as shown by the following facts.

Metabolic function.

1. Administration of the gland or preparation made from it to healthy men or animals, causes a greatly increased elimination of nitrogen in the form of urea. The nitrogen comes not only from the food but also from increased tissue destruction as is shown by the loss of weight and strength and increased excretion of sulphur and phosphorus. An increased destruction of body fat also occurs, so that thyroid therapy has been found efficient in treatment of obesity, but often dangerous because of relatively great amount of tissue destruction.

2. Loss of thyroid either through operation or disease reduces both nitrogenous metabolism and oxidative processes. Administration of thyroid preparations under these conditions will bring nitrogen elimination back to normal and the gas exchange back to normal.

3. Deficient thyroid secretion in young animals prevents their developing normally. In adult animals besides decreased metabolism there occurs trophic changes in the skin and its appendages, an increased amount of mucin-like material in the tissues and greatly decreased mental and nervous activity. All these conditions are relieved to greater or less extent by administration of thyroid tissue or its preparation. Evidently therefore thyroid exerts an influence upon growth and tissue changes; whether this depends upon metabolism, or is an independent and specific function cannot be determined.

Detoxicatory functions.

The evidence that the thyroid has for its function the destruction or neutralization of poisonous substances found in metabolism or through intestinal putrefaction is as follows:

1. After total removal of the thyroid from many species of animals acute symptoms develop that suggest strongly an intoxication.

2. After removal marked changes occur in the blood, severe anemia (as low as two million red corpuscles) with some leucocytosis and structural changes in the blood vessels.[6] Cytoplasmic degeneration of the liver, kidneys and myocardium may also result.[7] These results strongly suggest the presence of poisonous substances in the blood of persons or animals lacking sufficient thyroid tissue.

3. All the effects of thyroidectomy are more marked in carnivorous animals than in herbivora; indeed the latter may be able to live in fair condition for several years without a thyroid. Blum[8] found that thyroidectomized dogs, which were doing well on a milk diet, developed symptoms of athyreosis immediately they were given meat. This fact has been interpreted as indicating that toxic materials are formed from meat in the intestinal tract, which under normal conditions are neutralized by thyroid. On the other hand one may well imagine that the so-called autointoxication in athyreosis is not from intestinal putrefaction, but is due to incomplete protein metabolism within the tissues which are destroyed when protein metabolism is normal.

4. Reid Hunt[9] found that mice fed thyroid preparations have a greatly increased resistance to poisoning by aceto-nitrile. However this may be due to alteration in metabolism.

Whether thyroid exercises its toxic effect, assuming that it has one, by a direct neutralizing action of its secretion upon the toxic substance in the blood or indirectly by stimulation of the function of other tissues which perform the detoxication or in part locally within the gland itself is an unsettled problem.

Beidl summarizes his views as to the function of the thyroid in the following statement: "The thyroid is a secretory organ which discharges its secretion eventually into the blood, in the form of an iodine compound containing protein. This secretion acts as a hormone in that it modifies the activities of remote tissues. As far as we know the thyroid secretion plays the role of a dissimilatory hormone in that it causes an increased dissimilation and increase of normal activity in many tissues. This effect is exemplified by the augmented metabolism, the activity of the heart and many parts of the sympathetic nervous system, and of a series of internal secretory organs (adrenals, hypophysis). In other tissues are found evidence of the action of an inhibiting and assimilatory hormone, as shown in the increase in growth of bones, development of the sex glands, and decreased internal secretion of the pancreas."

EXOPHTHALMIC GOITER

It has not been conclusively determined that exophthalmic goiter is due to intoxication with excessive amounts of thyroid secretion either normal or abnormal, but there is abundant evidence in favor of this view. Most important is the similarity of exophthalmic goiter to the effects of hyperthyroidism or thyroidismus produced either experimentally or through over use of thyroid extract for therapeutic purposes. In thyroidismus there are observed rapid, weak pulse; greatly increased metabolism. especially of protein;[10] increased secretion, especially of perspiration; marked nervousness, and irritability often with mental confusion and delusion; gastro-intestinal disturbances, especially diarrhoea; sweating, flushing, tremors, palpitation of heart, loss of weight, and slightly increased temperature are also noted and not rarely typical exophthalmos may appear. Reid Hunt's acetonitrile test for thyroid secretion has been positive in blood from patients with exophthalmic goiter, which presumably means the presence of an excess of thyroid secretion circulating in the blood in this disease.

Oswald[12] found that the thyroid in exophthalmic goiter contains generally a smaller proportion of iodine than normal glands, but with the total amount approximately normal. The findings are very inconstant corresponding with the fact that in some cases the amount of colloid is abundant, while usually the amount is small. Kocher[13] found that the amount of iodine is either small or else very high, but is seldom the same as in the normal thyroids. Marine has found that the amount of iodine is in direct proportion to the colloid and inverse to hyperplasia. Fonio found that the physiological effect of exophthalmic goiter varied with proportion of the iodine. These results therefore indicate nothing either for or against hypothesis that exophthalmic goiter is due to autointoxication with the secretion of the thyroid.

It is impossible to produce a symptom complex resembling exophthalmic goiter in animals by feeding of thyroid, either normal or from exophthalmic goiter;[14] and after extensive study Marine and Lenhart have come to the conclusion that " The essential physiological disturbances of the thyroid in exophthalmic is insufficiency, its reaction compensatory and its significance symptomatic." Oswald invokes an abnormally irritable nervous system which stimulates the thyroid and in turn is stimulated by the thyroid secretion, constituting a vicious circle. Other observers are of the opinion that not an excessive, but a perverted secretion is at fault, a view not confirmed by the tests of thyroid extracts on animals. It is stated by Blackford and Sanford[15] that extracts of thyroid in this disease, as well as the blood of patients in the acute toxic stages, exhibit a marked depressor effect on blood pressure, which is distinct from that of choline, and which they believe to be specific for exophthalmic goiter.

Even if the hypothesis that exophthalmic goiter is due to intoxication with thyroid secretion is correct, we have no satisfactory explanation of the cause of the hyperactivity of the thyroid.

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EXOPHTHALMIC GOITER:

ETIOLOGY AND SYMPTOMATOLOGY.

Read before the Medical Society of the County of Albany, December 17, 1914.

By CLINTON B. HAWN, M. D.

Aside from the facts that exophthalmic goiter occurs more frequently in the female than in the male, and that its incidence in childhood and old age is less than in early adult life, little is known in regard to its etiology. These factors can have nothing more than a predisposing effect on its occurrence, while direct inciting causes are not at this time sufficiently well understood to warrant more than the briefest mention. Grouping these causes into the following classes will no doubt suffice for the purposes of this discussion.

I. Toxemia due reflexly to altered metabolism or abnormal or unbalanced functions of other glands or organs.

II. Nervous stimulation of the thyroid gland occurring in worry, anxiety, fright, or nervous shock.

III. Infection, or toxemia due to infectious disease.

IV. Irritation of chemical poison as iodine.

Of these classes the first, embracing the unbalanced function of physiologically related glands or organs, has undergone of late considerable investigation, and gives promise of affording a field for extensive research along the lines of the Hormone theory, which may eventually place this subject on a firm basis. However our present knowledge concerning this theory is so limited as to render further discussion of this phase out of place at this time.

Although there has been so much said of late in regard to symptoms of hyperthyroidism, without evidence of either enlargement of the thyroid or exophthalmos, I feel obliged by the title to limit my remarks to the condition defined as follows: A constitutional disease due to excessive functional activity of the thyro-parathyroid apparatus, and to the resulting dilatation of all arteries which the excess of secretion causes, probably by sensitizing the depressor nerve. The main symptoms, exophthalmos and goiter, although varying markedly in degree in different cases, being so obvious and well known by every practitioner of medicine deserve very little consideration at this time.

Enlargement of the thyroid gland may be so slight as to be perceptible only by careful palpation, but usually presents as a visible tumor, fairly soft in consistency, frequently showing visible pulsation, but sometimes only a faint thrill detected by careful palpation, usually there may be heard a systolic murmur over this tumor. This enlarged thyroid is seldom painful or tender but may cause obstructive symptoms by pressure on the trachea or neuralgic symptoms by pressure on the adjacent nerves. Degree of enlargement of the thyroid seems to have very little relation to the gravity of other symptoms of exophthalmic goiter, many cases presenting enormous goiter and very slight general symptoms.

Degree of exophthalmos, like degree of goiter, is no indication of the severity of the disease. Noticeable bulging of the eyeballs exists, however, in at least seventy-five per cent of the cases, and in all cases the enlargement is sufficient at least to make the complete closing of the lids impossible or difficult. Exophthalmos may be unilateral, or may vary in degree in the two eyes, and is rarely an early sign of the disease. The special symptoms, as Graefe's and Stellwags signs, although explained otherwise by some observers, are probably produced as a mechanical result of the exophthalmos.

A somewhat more extended consideration of the general symptoms is warranted at this time. For convenience let us classify these symptoms under two general heads, nervous, and circulatory, and inasmuch as derangement of the nervous system is practically a constant symptom it falls naturally into a place of prime importance, especially in view of the fact that in a certain number of cases it is impossible to say whether a deranged nervous system is solely a symptom, or in reality the cause of the disease.

Restlessness, excitability and insomnia, grouped together so frequently as " Nervousness," may be the only evidence of mental derangement, while in extreme cases we sometimes see conditions approaching dementia, and between these extremes, various grades of abnormal mentality which may be grouped together under the broad shelter of the term neurasthenia. Symptoms referable directly to the nervous system itself are more rare and inconstant. Although neuralgia in various parts of the body sometimes occurs and dizziness is not uncommon. Tendon reflexes are usually slightly increased and muscular cramps, especially in the legs at night, often prove annoying. The most characteristic symptom referrable to the nervous system is tremor. Best seen in its milder forms in the hands and fingers, it may become so marked and widespread as to simulate chorea and tetany. The tremor is usually rapid, eight to ten to the second and quite regular. Muscular weakness is always present in some degree and may result in atrophy and paralysis; especially in the muscles of the legs.

On the border line between nervous and circulatory symptoms are general flushing, chills, local congestions or anaemias, sweating and diarrhoea. Seldom do we see a case of exophthalmic goiter in which one or more of these symptoms is not present, and often they are the most difficult of all the symptoms to control.

Circulatory disturbances usually occur early in the course of the disease. Palpitation may be the only sign of trouble noticed by the patient, and often is so annoying as to bring them to the physician. More important, however, is tachycardia, which may exist without the knowledge of the patient, but the degree of which is more nearly an indication of the severity of the disease than is any other symptom. The pulse rate is usually from ninety to one hundred and forty, but sometimes is so rapid as to make its estimation by any other means than the sphymograph an impossibility. Arrhythmia is often noted, but is usually apparent only at the radial, while an apex tracing will show perfect regularity.

The heart itself usually becomes hypertrophied and evidence of its powerful systole may be seen in visibly throbbing carotids and aorta. This may be so severe as to cause a jerk of the head with each heartbeat, very similar to that seen in some cases or aortic regurgitation. Various cardiac murmurs have been mentioned in this disease, but of course are purely accidental and not true symptoms. Alterations in the physical characteristics of the blood are not marked, although a moderate secondary anaemia is usually present.

In the entire array of symptoms, tremor and tachycardia stand out as the most striking and constant, while more or less marked enlargement of the thyroid and exophthalmos are essential to the symptom complex. The other symptoms mentioned may or may not be present in any given case, and their frequent occurrence in individuals not suffering from exophthalmic goiter renders them of small diagnostic value.

THE MEDICAL THERAPEUSIS OF EXOPHTHALMIC GOITRE.

Read before the Medical Society of the County of Albany, December 17, 1914.

By ERASTUS CORNING, M. D.

For the purposes of a brief review, such as this must be, the medical treatment of exophthalmic goitre may conveniently and logically be considered first with reference to methods which have for their aim the development of an anti-serum, and second any curative or palliative agents not included in the first group.

The attempts to produce a serum which would prove efficacious in cases of exophthalmic goitre date back only some fifteen years. Just previous to the initiation of these attempts, the attention of the medical world was focussed on the brilliant results of thyroid feeding in cases of Myxedema. It was noted by some observers that over-doses of thyroid produced a train of symptoms including tachycardia and tremor, which suggested Graves' disease. Impressed by this fact, and acting on the belief that Graves' disease was due to a faulty thyroid secretion, Gauthier, Ewald, Von Noorden and others, treated a series of Graves' cases with thyroid gland. They at first reported cures, but these were later questioned and still later disproved. In 1899 it was observed that injury to or removal of the parathyroid glands produced symptoms of Graves' disease, especially tetany and convulsions. On the strength of this, Maussu in 1899 and MacCallum in 1903 attempted the cure of Graves' disease by Parathyroid feeding. Their results, however, were unsatisfactory, and in 1904, Kishi disposed of the theory by proving that extirpation of the thyroid produced identical symptoms even when the parathyroids were left in. These attempts at organo therapy served to clear the way for the workers in the field of serum therapy. In view of our limited knowledge of thyroid function it is obvious that attempts to produce a serum for Graves' disease must rest to a very great extent on a theoretical basis. The fundamental ideas agreed on by all of the earlier workers, were 1st, that the symptoms of Graves' disease were caused by an hyperactivity of the thyroid gland, and 2d, that the physiologic action of the thyroid secretion is to neutralize some toxin arising in the course of metabolism.

Beebe thus describes the theoretical basis of the earlier attempts: " Since the typical picture is that of an intoxication of thyroid origin, attempts have been made to neutralize the products of the excessive activity of the gland, by providing an oversupply of the toxin with which it is supposed the thyroid secretion normally combines. The blood of myxedema patients, and blood of thyroidectomized animals theoretically should contain an excess of the metabolic toxin, ready for combination with the thyroid secretion."

Acting on this assumption, Burghardt and Blumenthal in 1899 prepared a serum from the blood of myxedema patients, while Ballet and Enriquez in 1894 removed the thyroid glands from dogs, and, when tetany developed, bled the animals and collected the blood serum, which was claimed to contain an excess of metabolic toxins, uncombined with thyroid secretion. Burghardt and Blumenthal also worked with a serum obtained from thyroidectomized goats, and following Lanz's results, obtained by using the milk of thyroidectomized goats, the two previous workers introduced " Rodagen " which was a powder prepared from the milk of thyroidectomized goats. In 1901 Merck produced a serum obtained from thyroidectomized sheep. This he named " Antithyroidin " and as a result of Moebius' investigations of it, it became widely used. Carrion and Hallion in 1903 experimented with a serum that they called " Myhéme." It was obtained from thyroidectomized sheep, and differed from previous ones in that the product was the result of mixing serum, glycerin and corpuscles. In 1904 Murray prepared a serum from the blood of rabbits previously rendered immune by feeding them on increasing quantities of thyroid gland. This completes the list of those sera that were produced in what may be called the first era of the serum treatment of exophthalmic goiter. It will be noted that all the sera thus far considered have been somewhat empirical in their nature: their beginnings were prompted by purely clinical observations and their manufacture was controlled largely by theoretical considerations. In what we may call the second era, the inspiration likewise came originally from the clinic, but the methods applied were based on facts that were more amenable to laboratory control. The starting point was the result of the operative treatment of Graves' disease in its later modification whereby only part of the gland was removed. This procedure, coupled with the results of the investigation of the cytolitic power of serum, led investigators to attempt the production of a serum which would have a solvent action on the cells of the thyroid. This serum was produced by injecting an emulsion of thyroid gland of an animal of one species into the peritoneal cavity of an animal of a second species. The serum was then collected from this latter animal and was introduced into the circulation of an animal of the previous species. From this latter, the ultimate therapeutic serum was obtained. Abroad, Mankawsky and Gantscharukar in 1902, and in this country Yates in 1903, MacCallum in 1903, and Portis (1) in 1904, worked along these lines. But it was soon found that although sera so produced did possess anti-action against the particular organ used for injection, yet they were not specifically thyrolytic, and produced degenerative changes in other epithelial viscera. According to the work of Pearce and Jackson in 1904 this was probably due to the formation of thrombi, caused by the hemolytic and hemagglutinative properties of the sera. The researches thus briefly described, mark as will readily be seen, an important advance in the progress of the serotherapy of Graves' disease. The problem has been attacked from a new point of view, and the difficulties encountered only serve to emphasize the necessity of overcoming them. So far, in what we may call the third era, only one serum has appeared which attempts to overcome the insuperable objections to those previously described. The rationale of this later serum differs so essentially from those which have preceded it, that a few of the fundamentals must briefly be described in order that our conception of its possible value may be more clear In 1905, S. P. Beebe of New York, working with nephro-toxins and hepato-toxins, attempted the production of sera that should be more specifically cytolytic—that is, sera that would have a marked affinity for the organ in question, without the hemolytic and hemagglutinative properties of which we have spoken. In order to accomplish this, he abandoned the idea of using emulsions of organ pulp, and worked with nucleoproteids alone. He thus describes his reasons for so doing: "We know that the nucleus is the most important morphologic and physiologic part of the cell. If specificity is a function of any of the cell constituents, the nucleus must be most intimately concerned therein and it seems to me that it is not unreasonable to suppose, that by using only the nucleo proteids for the development of the serum, a considerable amount of what we may call extraneous matter has been excluded." As a result of this reasoning Beebe was able to obtain sera that in vitro were much more definitely specific. Dr. John Rogers of New York, who had been following Beebe's work, suggested to him that he attempt the production of a Goitre serum produced in a manner analogous to his nephrotoxins and hepatotoxins. Facing this problem, Beebe at once made a radical departure. It will be remembered that in the preparation of all previous sera, the thyroid glands of animals other than man had been used. But recent researches in the chemistry and physiology of the cell had made it evident that if true specificity was to be obtained, it was necessary to develop the serum from the proteids of the same species of animal as would be used later on for testing its activity, or in other words homologous, and not heterologous proteids must be used. But in considering the problem of Graves' disease, there were two things that a serum should do: first it must through its cytolytic properties, inhibit glandular activity, and second, it must possess antitoxic properties to combat the toxic activities already at work. We have before seen that the nucleoproteids possessed the required specific cytolitic power. The development of an antitoxic principle, was a wholly separate problem. There have been three proteids obtained from the thyroid gland, a nucleo proteid, a globulin and an albumin. Oswald has shown that of these three, it is the globulin which is the iodin containing proteid of the gland and that it alone is responsible for the peculiar physiologic activity which the gland as a whole possesses. Therefore, Beebe in manufacturing his serum takes thyroid glands from patients dead of Graves' disease. From them he isolates the nucleo proteids, and the thyreoglobulins. A mixture of these two is injected intraperitoneally in the rabbit at five-day intervals. Eight days after the last injection the rabbits are bled, and from that blood is prepared a serum which should be both specifically cytotoxic against the thyroid gland, and antitoxic as regards the toxins produced by its diseased condition.

It is worthy of note that this serum, representing what we have been pleased to call the third era, has for its basis of development only facts which have been brought out through recent laboratory research.

So far, sera prepared against exophthalmic goiter, have not come into very general use. This is in part due to their greater difficulty of preparation and administration but also because none has as yet been offered to the profession that can be relied on in all cases.

Of medicinal agents other than sera, we have many. Aconite, Veratrum Viride, Ergot, Quinine, Stropanthus, Belladonna, Sodium Phosphate, Opium and Arsenic are the drugs more commonly employed. Electricity, X-Rays, dietary and eliminative procedures, rest cures and hypnosis all have their adherents. It is obviously impossible to enter on any discussion of the relative merits of these methods. Indeed, even if time permitted, it is doubtful if any trustworthy conclusions could be reached. Men of the highest integrity, speaking with the authority of wide experience, report success or failure with these agents in a way that at first seems irreconcilable. Thomson, working on the theory that the disease rests on a gastro-intestinal basis, achieves results by dietary and eliminative therapy that are as brilliant as those obtained by Forcheimer, whose main dependence is on the neutral hydrobromate of quinine given in combination with ergot. Bulkely reviewing the results obtained by the use of eight of the different agents included in the group of serum therapy and organotherapy arrived at the conclusion that from all of the sera, palliation seems certain and cure possible.

In explanation of these conflicting reports, two things seem reasonably certain. First, the majority of cases of exophthalmic goiter, if given reasonably good care for a long enough period, tend toward recovery. Second, no medical treatment yet suggested has been carried out to the exclusion of the fundamental principles that apply to all cases. It thus becomes evident at the outset that we are face to face with a dilemma. How are we to proceed when there is so wide a divergence of opinion?

For practical purposes we may consider the treatment of exophthalmic goiter in two stages. The first stage consists of the application of those principles that are agreed on by practically all.

1st. *Rest* is the very foundation of all the forms of treatment. Absolute rest in bed is not necessary in all cases, but a careful analysis of the events preceding the onset of the disease will reveal in all cases evidence of overwork, worry, strain, mental or physical, shock or excesses in one way or another. It is our first duty to remove or modify these conditions as far as lies in our power. In the milder cases, a sympathetic and suggestive talk with the patient will suffice to accomplish this purpose. In the more severe cases, rest in bed, with an ice bag over the heart, or over the thyroid, will be necessary. The duration of this phase of treatment will of course be governed by circumstances.

2. *Ingestion.* In every case, no matter how slight, immediate attention should be paid to the gastro-intestinal tract. Abuse of stimulants either as alcohol, tobacco or coffee is sufficiently common to be ascertainable in the majority of cases. Let me insert a word of explanation at this point. The word "abuse" has no universal significance. The old saying that "one man's meat is another man's poison" is especially applicable here. If one cup of coffee at breakfast makes a man's heart flutter, it is one cup too many, and he is abusing that stimulant. In goiter, where a hypersensitiveness to all forms of stimulant exists, the lines must be drawn closely. The same thing is true of sexual activity. I have in mind one case where the beneficial results of months of patient effort were temporarily destroyed and a most distressing and dangerous relapse occurred as the direct result of an infraction of this law.

The use of meat in the dietary should be absolutely prohibited at first. As the disease becomes quiescent meat may be gradually restored, first in the form of chicken, but it is an actual menace in the earlier stages of all cases, and during the active stage of the more severe ones.

3d. *Elimination.*—Every effort should be made not only at first but continuously to promote free action of the bowels. Mercurials and salines are indicated and should be used generously. Thomson gives his patients a mercurial once or twice weekly, even in the presence of diarrhea, with excellent results. Free and repeated irrigation of the bowel is of great value and should be employed wherever possible. The excessive thirst that so often accompanies the disease is an assurance in most cases that plenty of water will be taken, but in those cases where thirst is no longer prominent and where any tendency to constipation is present, water should be prescribed.

4th. *The Patient.*—Experience in the treatment of this disease impresses one thing indelibly on the mind of the practitioner—that the patient must be studied as carefully as the disease. Every goiter patient is a nervous patient and no two are alike in their expression of nervousness. The course of the disease is long and the faith of the patient will be severely tried. His confidence must be gained and retained. Many of them are almost childlike in their belief in the physician's ability or in their distrust of his judgment. To a greater extent, perhaps, than in other diseases, these patients think of everything in terms of their own ailment. Nervous, emotional, fearful, introspective, easily discouraged, they translate the ordinary ups and downs of daily life into symptoms of the disease. They need assurance, they need explanation, they need confidence.

5th. *The Physician.*—From what has been said it will readily be seen how severe is the tax on the resources of the physician. There are but few diseases that make so many demands on him in ways that are not included in the materia medica of the schools. He who successfully treats these patients must at one time or another be all things to all men. The psychic element is so strong in these cases that a minute study of the patient's personality is as essential as it is in cases of nervous prostration. Without it, half the battle is lost: with it, the potency of whatever line of treatment is followed is increased tremendously. The physician must be prepared for a long, harassing and discouraging siege, and only those who have the patience to endure should shoulder the burden.

For the very reason that the psychic element plays such a part, the physician should base his judgment of the progress of the case almost wholly on objective symptoms. The temperature, the weight, the pulse rate, the blood pressure, the measurement of the neck, the color of the skin and the degree of exophthalmos are the rocks on which we may stand secure. The patient's statements as regards nervousness, sleep, appetite, thirst, loss of hair, bowels, perspiration and strength are of great importance, but it is necessary to bear in mind the type of patient we have to do with, and accept their statements with caution.

Once these general suggestions, applicable to practically all cases, have been put into effect, we still face the problem of the selection of a special line of treatment. Let it be said at once, that no general rule can be laid down. After a period of observation, during which the patient and his disease have been studied along the lines suggested, a certain amount of the confusion which might have existed at the outset will clear up. A certain number of cases will stand out as obviously surgical subjects. In others, the simple measures suggested will produce such rapidly favorable results that a continuance of such general measures will suffice. In others, more definitely symptomatic treatment will be necessary, as for instance the use of strophanthus where the heart needs support, or of arsenic as a general reconstructive. In another group of cases it will soon become evident that more specific measures are needed, but even in this group no one form of treatment is applicable to all, and in many cases it will be necessary to try several things in succession. The combination of the neutral hydrobromate of quinine with ergot, as advocated by Forcheimer, electricity, X-rays or serum treatment have all been used with sufficient success to warrant their inclusion in our resources. As might be expected, the largest number of good results in all of them are noted in the earlier cases, but all of them have to their credit brilliant cures of really advanced conditions. The great advantage of Forcheimer's treatment is its ease of administration and relative cheapness. It unfortunately does produce cinchonism in some instances. Electricity and the X-rays are, especially the latter, so much in the hands of specialists that these measures are less practical for the general practitioner. The galvanic current, however, properly and consistently applied, is an agent of no mean effectiveness and may be used by any one with ordinary equipment. The serum treatment, particularly that of Beebe, is not without danger, the reactions should be carefully watched, and as the administration is by hypodermic it is, in a sense, a more formidable method than the average man will care to undertake. Let me repeat, that no matter what method is ultimately chosen, the strictest adherence to the general principles outlined as the first stage of treatment should be rigidly observed.

Exophthalmic goiter is as difficult a disease to treat as it is an unpleasant one to suffer from. Until we have a specific, if we ever do, we must use and rely on, not one, but on all of the methods tried and found of value and use the utmost discrimination and caution in accepting the newer remedial agents that are still on trial.

SURGICAL TREATMENT OF EXOPHTHALMIC GOITRE

Read before the Medical Society of the County of Albany, December 17, 1914.

By ALVAH H. TRAVER, M. D.

As there is still some discussion whether medical or surgical treatment is most efficacious in exophthalmic goitre I will quote from some of the best known surgeons' writings on this subject. Kocher says " To say that this is best treated surgically is not enough. It has proved itself superior to any other form of treatment."

Ochsner says, " The rapid and permanent disappearance of all these symptoms after operation encourages me to employ surgical treatment in all cases which did not recover permanently by internal treatment. Certain cases may be relieved permanently by internal treatment, while others will be improved only temporarily by internal treatment. This latter class should be subjected to surgical treatment at an early stage of the disease before the effects of toxins have hopelessly impaired especially the muscles of the heart and nervous system."

Murphy says, " In the exophthalmic type of goitre, medical treatment is in nearly all cases a failure, except in those cases occurring in young girls, and very young girls at that. The condition as a rule is a progressive one. Medical treatment at best gives only a temporary improvement. These cases ought to go to the surgeon. Therefore, if you make a diagnoses where there are present tremor, and nervousness, and tachycardia, which comes early, all these preceding enlargement of the glands and exophthalmos, that is the time to remove the thyroid, because then it can be done practically without danger. You avoid a long period of invalidism, you avoid the fatal conditions that would otherwise develop later, and which inhibit or prohibit operation."

I think all will agree that surgical rather than medical treatment is indicated in all cases in which the acute attacks recur and become more severe notwithstanding the fact that the proper medical treatment has been carried out.

It is a well-known fact that if the case is allowed to go on there will occur degenerations of internal organs. Especially marked is the degeneration of the heart muscle. It must be most emphatically stated that if an operation is to be done with any idea of doing the patient any permanent good, it must be performed early before degeneration of the heart muscle has occurred, for removing a part of a thyroid gland can not make a degenerated heart muscle return to its normal condition.

Preparation of the Patient

The preparation of the patient, the selection of the assistants, and the selection of the appropriate operation in each given case, are most important considerations.

We know that mental strain and excitement are important factors in the etiology of exophthalmic goitre. It was in view of this fact that Dr. Crile developed and found very useful his anoci association, which in simpler words is the conservation of nervous energy. He says, "We know that fear alone may cause physical damage not alone to the brain but to other organs. For instance, fear increases the amount of secretion of adrenalin, it decreases digestion, etc." I will describe his manner of preparation of the patient more fully under the subject of anasthesia of goitre cases. Suffice it here to state that the patient must be kept quiet and free from all excitement, and if possible must not be operated on during the acute stage of the disease. The knowledge of this fact has done more than anything else to reduce the mortality following operation. So if the patient is seen during the acute stage with high pulse and temperature and in the height of nervous excitement keep her quiet in bed, apply ice bag to the neck and give appropriate medical treatment. After the acute stage is passed and the patient is on the gain, then is the best time to operate.

It is hardly necessary to state that a patient with exophthalmic goitre is at best not a very favorable subject for operation, so you must have a suitable table, one in which the head can be raised; you must have suitable instruments, and assistants that can be depended on. We may get rather active hemorrhage and if the assistant gets excited and jabs about with artery clamps he will doubtless tear the friable tissues and so increase the hemorrhage or possibly catch important nerves.

ANASTHESIA

The choice of the anasthetic in any given case depends on the severity of the case, and especially on the condition of the heart. In the exceedingly severe cases, probably local anasthesia, with one-half of 1% novocaine is the safest method. In former years, when it was the custom to operate on cases during the acute stage of the disease, local anasthesia was used more frequently than it is at present.

If the operation decided on is simply to ligate one or more vessels, local anasthesia is very satisfactory. If the more complete operation of removal of the gland is to be done, local anasthesia can be used and has this advantage that by having the patient speak and noting the voice you may know whether or not you are injuring the recurrent laryngeal nerve. But local anasthesia has the disadvantage that the patient may become very nervous which may have a bad effect on the patient. In order to relieve the patient of the bad effects of the extra excitement that might be caused by preparing the patient for operation Dr. Crile makes use of his anoci association, which briefly is as follows: The patient's consent for operation is obtained but is given no knowledge of the time of operation. She is kept quiet in bed and hypodermics of harmless substances are occasionally given so that hypodermic of morphine may be given before operation without the patient being aware of the change. Each day the patient is given various aromatics to inhale so that at desired time you may change to ether and patient does not know that anesthetic is being given. On the day that operation is to be performed the patient, while still in bed without any knowledge of the fact that the operation is to be done that day, is given hypodermic of morphine and atropin and then in place of aromatics ether is given. Novocain is injected locally so as to require as little ether as possible. In this manner the patient goes quietly under ether and is free from the fear of operation.

In most cases if sufficient care is taken in its administration ether is safe and all things considered is the most satisfactory anasthetic for goitre operations.

Operations

At one time operation on the sympathetic nerve supply of the thyroid was supposed to be beneficial but later was found to have no lasting effect, so this operation has been discontinued.

The injection of boiling water has caused benefit. This is done in very acute cases, and may have to be done several times before later operation of removal is considered safe.

The ligation of the thyroid arteries is indicated in very severe cases in which the more complete operation of removal of the gland is not considered safe. If it is thought best, first ligate one superior thyroid artery. If no bad effects follow this operation in a few days ligate the other superior thyroid artery or possibly the inferior vessels. Charles Mayo says, " A large number of cases show average gain of 22 pounds in four months following ligation of blood vessels." If there is sufficient improvement following these incomplete operations and patient's condition will allow, then operation of removal of the greater part of the gland can be done.

It is hardly worth your time for me to go in detail in the description of goitre operations, for the removal of the thyroid is not an easy operation and unless one has had some experience in the operation he would be very unwise to undertake its removal without first carefully looking up the anatomy and surgery of the thyroid gland.

Complications

One of the most alarming and disastrous complications following operation on exophthalmic goitre is tetany. This condition is thought to result from removal of the parathyroids or possibly traumatism of them during operation so that they do not act properly. In the removal of the thyroid, it is advisable to leave in the posterior part of the capsule near the middle line, for by so doing you will not disturb any of the parathyroids. Should you discover that you had removed one of them it is best to replace it beneath the part of the capsule left in. For while a person can live with one or possibly two of the parathyroids removed yet it is safer not to do so for we have possibly injured some of the remaining glands or possibly some of them may not be active as these glands are sometimes found atrophied. Should tetany unfortunately occur you may inject parathyroid serums.

It is thought advisable to leave in drainage following operation in order to lessen the absorption of any thyroid secretion that may have been forced out of the gland during operation. It is also thought to be advisable to handle the growth as carefully as possible during the operation as rough handling might force out its secretion into the circulation and so cause tetany. Yet this belief is not so commonly heard as it was a few years ago before the action of the parathyroids was so well understood. For now it is known that tetany follows the operation not so much because of this absorption of thyroid secretion as it is due to the removal or injury of the parathyroids.

Another complication is paralysis of the vocal cords. All patients that are to be operated on for goitre should have their vocal cords examined for one-fourth of all cases show some paralysis. And should this not be discovered and perhaps become worse following operation the surgeon would be censured unjustly. If the nerve has not been cut or crushed during operation the paralysis will become less marked following the operation. About 10% have temporary hoarseness following operation, and in about 5% there is a permanent partial paralysis of one vocal cord yet no hoarseness results.

Formerly myxedema occasionally followed operation for goitre but if at least one-sixth of the gland is left in we need have no fear of this condition.

MORTALITY

The marked reduction in the mortality rate following goitre operations is not so much due to better operating as it is to the more careful preparation of the patient; not operating during acute attacks, treating the heart, relieving any complications, as ascitis, etc. The mortality rate has been reduced from 30% to 2%. And this 2% is due in great part to delaying operation till marked degeneration of the heart muscle has occurred.

RESULT

Those cases in which operation is delayed till the heart is degenerated will be improved but not cured. The percentage of cures will depend on time operation is done and on what you consider a cure. This statement is of especial import in speaking of medical cures. For in those cases cured under medical treatment, the gland is still there and is apt to return to excessive secretion at any time, for it is a known fact that there are periods of quiescence followed by acute exacerbations.

Charles Mayo says, " Operation results in 75% of cures. The remaining 25% are improved, amount of improvement depending on stage of disease and complications present at time of operation. About 10% may have some return of the symptoms within 3 years. In these cases a certain percentage can be improved by farther operation as ligating vessels or removing more of the gland. The question can be rightfully asked if the small part of the gland remaining after operation can cause so much trouble, as it does in a small percentage of the cases, what would have been the result if the entire gland had been left in to cause trouble?

As Dr. Ochsner's opinions command respect, I will give his conclusions on this subject. He says:

1. " The diagnosis of cases of exophthalmic goitre regarded as suitable for surgical treatment is relatively easy and should be made early.

2. All cases of exophthalmic goitre which are not relieved permanently by rest, hygiene, dietetic and medicinal treatment should

be treated surgically before there has been irreparable harm done to important structures.

3. This is especially to be born in mind in connection with a class of cases that respond readily to non-surgical treatment only to relapse at once upon the slightest strain.

4. The dangers of operation depend largely upon the harm done by the disease before operation.

5. These dangers may be eliminated by early operation and by preliminary treatment with rest, hygiene and diet.

6, The operative danger lies in the anasthetic, sepsis, acute hyper-thyroidism, tetany, etc.

7, All these dangers may be eliminated easily with reasonable skill and attention to details.

8. The patient should receive carefully directed after-treatment, with rest, hygiene and diet, following the operation until especially the blood, the nervous system and the heart have thoroughly recovered from the effects of the disease.

9. All excitement should be prevented before, and for a long time after, the operation."

One can hardly close a paper on this subject better than has Dr. Frazier, who says, " The general practitioner has every right, if he so chooses, to try non-surgical means in the early stages of the disease before the myo-cardium or kidneys or nervous system is permanently damaged. But if he fails to arrest the disease and does not advise operation in the curable stage, he should be just as severely censured as the practitioner who fails to call for surgical aid until his patient with acute appendicitis has developed peritonitis, or one with a callous ulcer of the stomach, carcinoma. The conditions are quite parallel. The extraordinary recuperative power of patients with Graves' disease is amazing, and in most cases, sick as they are at the time of operation, they will almost uniformly be restored to perfect or reasonably good health."

Clinical and Pathological Notes

Caesarean Section—Report of Case. By JOHN A. FARRELL, M. D., Saranac Lake, N. Y.

It was not until 1610 that the first authenticated operation was performed by Trautman, of Wittenberg, Germany. In former times the uterine wound was left unsutured, and Saenger in 1882, did great service by the introduction of a secure uterine suture, and presented the technic of the "classical" Caesarean section.

The indications for Caesarean section may be absolute or relative.

It was formerly done only as a measure of last resort and was altogether limited to cases of dystocia due to extreme contraction of the pelvis. The type of case in which a pelvis measures in the conjugate diameter 6.5 centimeters, with a living child, or 5 centimeters with a dead child, the indication for section would be absolute.

The operation is said to be relative when it is selected in preference to other possible methods of delivery. With a conjugate diameter between 7 and 7.5 centimeters choice may be made between Caesarean section, induced labor, symphysiotomy and craniotomy. The latter operation is now seldom performed. Many of our smaller hospitals have operators who present excellent records of having done several successful Caesarean sections.

The induction of premature labor in cases of moderate contraction has shown considerable disadvantage and the future fate of the infants has been so far from satisfactory that Caesarean section has been advocated as a preferable alternative.

Craniotomy has been denounced as an unjustifiable procedure except in rare instances, and in proportion Caesarean section has been brought to the fore.

When the time for induced labor has passed as in the case cited below the choice of operation lies between Caesarean section and symphysiotomy.

Williams, of Baltimore, believes that the upper limit for the absolute indication for Caesarean section should be advanced to seven centimeters, and the relative indication to

8.5 centimeters for flat and 9 centimeters for generally contracted pelves.

Thus in the case here reported, the indications for Caesarean section were, a generally contracted pelvis of moderate degree, having a conjugate diameter of 8 centimeters. Breech presentation, engagement at the brim, firm contraction of the uterus around fetus; moderately severe contractions for about forty hours, very strong and frequent pains for about seven hours; membranes ruptured at onset; secondary inertia; patient showing signs of exhaustion.

Case: Mrs. J. Z., age 36; primipara, medium height, operated on January 20, 1915, by Dr. R. M. Brown, assisted by Dr. C. C. Trembley, F. B. Trudeau, and myself. The patient was placed on the table catheterized and narcotized with ether. The pubes was shaved and prepared aseptically.

An incision was made six inches long, one-third of it above the umbilicus and two-thirds below. The skin and fascia were incised and the muscles separated by blunt dissection. The peritoneum was picked up and cut. The uterus was then brought into view. Tampons were placed about the uterus and the assistant pressed the abdominal walls on each side of the uterus retracting the wound edges and bringing the uterus still more prominently into the wound opening. An incision was made through the entire uterus wall from the fundus to a point just short of the retraction ring. Bleeding was quite free. The operator passed his hands through the membranes, grasped the child by the head, and extracted it. The child, male, weight eight pounds, cried at once. Placenta and membranes were removed instantly and a hypodermic of ergot given. The uterine incision was closed with chromic catgut No. 2 through and through interrupted sutures. Superficial sutures of finer catgut and silk were used. The denuded area was cleansed with hot saline solution and dried with sponges. The uterus contracted promptly.

The operation was concluded by closing the abdominal incision in the usual way.

The patient went through an undisturbed and afebrile puerperium, and February 1, 1915, at this writing, the child is thriving.

Editorial

The scurvy had begun to show itself on board. One man had it so badly as to be disabled and off duty, and the English lad, Ben, was in a dreadful state, and was daily growing worse. His legs swelled and pained him so that he could not walk: his flesh lost its elasticity, so that if pressed in it would not return to its shape; and his gums swelled until he could not open his mouth. His breath, too, became very offensive; he lost all strength and spirit; could eat nothing; grew worse every day; and, in fact, unless something was done for him, he would be a dead man in a week, at the rate at which he was sinking. The medicines were all, or nearly all, gone, and if we had had a chest-full they would have been of no use, for nothing but fresh provisions and *terra firma* has any effect upon the scurvy. This disease is not so common now as formerly, and is attributed generally to salt provisions, want of cleanliness, the free use of grease and fat (which is the reason of its prevalence among whalemen), and, last of all, to laziness. It never could have been from the last cause on board our ship; nor from the second, for we were a very cleanly crew, kept our forecastle in neat order, and were more particular about washing and changing clothes than many better-dressed people on shore. It was probably from having none but salt provisions, and possibly from our having run very rapidly into hot weather, after our having been so long in the extremest cold.

Two Years Before the Mast. RICHARD HENRY DANA.

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A Practical Lesson in Sanitation.

The eradication of infectious diseases by improved sanitary measures is an accepted fact of preventive medicine, and at this time needs no advocate. The visible proof of this, however, lies in somewhat restricted directions, for the best results have been attained in the destruction of the sources of contagion, and in the control of specific organisms. Typhoid fever affords the most definite example of the protection of communities against disease, whereas the war upon tuberculosis is as yet only promising. Personal immunity may be temporarily secured against certain diseases, but the personal element still remains the uncertain factor. That much may be done by the elevation of standards of living is believed, and in general, may be said to have been proved, as shown, in part, at least, by the extension of the average duration of human life. This assumption, however, rests largely upon abstractions, and is usually difficult of demonstration. A definite instance is of value, and such has been afforded in striking manner by the experience of one of Albany's noteworthy institutions.

The Albany Orphan Asylum, instituted in a modest way in 1829, for the relief of destitute children, passed through the usual difficulties of a growing private charity, and after many years of struggling effort, was finally accommodated in a large building within the city limits. Pressure for admission of children increased, until finally, for a number of years, there were many more inmates than could be conveniently cared for, and, as is too often the history of like projects, overcrowding, routine and discipline became embarrassing problems for the management. An opportunity presented for the sale of the property, and in 1908 a series of new cottage buildings were occupied upon a farm, and plans of organization were adopted looking to greater freedom. Modern methods of construction were followed, and with full faith in the correctness of the theory, the management omitted hospital provision, and predicated health only as the natural consequence of hygienic life, particularly in the care of children.

The results have been somewhat startling in the degree in which they have been attained. The report of the Asylum for the year ending September 30, 1914, has recently been issued, and contains the following remarkable statement upon the health and mortality of the children, all the more striking for the contrast between the old method and the new:

" It is a generally accepted fact that observation of the rules of hygiene are conducive to health, though proof of this generalization is not often demonstrable. Striking evidence of this truth has been given by the decrease in mortality since the occupation of the new asylum. During the seven years from 1901 to 1907, inclusive, when the old buildings were in use and large numbers were crowded together under strict discipline, there were ninety-seven deaths in a total of 1,815 children. In the year 1907, 522 children were cared for and there were nineteen deaths from the following causes:

"Gastritis, one case; heart disease, one case; malnutrition, five cases; pneumonia, eight cases; tuberculosis, two cases; meningitis, one case; abscess, one case.

"The old asylum was constructed and conducted upon what was technically known as the "congregate plan," a term which is self-descriptive. The new plant was a radical departure, and buildings were erected to accommodate a limited number, with the purpose of relinquishing or subordinating discipline to the stimulation of normal activity in a congenial and sanitary environment. This "cottage plan" has now been in operation seven years, and in this period 1,094 children have been cared for with only one death, the result of an attack of meningitis. There have been cases of contagious disease, as scarlet fever, diphtheria and the like, which have proved so disastrous in the past, and these have been prevented from spreading and assuming epidemic form by prompt quarantine and isolation, and, probably, also from assuming fatal type by the rugged vitality of the victims.

"The retrospect of such conditions very properly arouses a sense of regret, that greater knowledge was not had. The institution at that time was not unlike others of its class, and the severe lesson was needed to point the way. The later record of efficiency, developed from this experience and at this terrible cost, has revealed not only the exigency of certain principles of architecture, but the need of an intelligent and sympathetic administration. The successful attainment of this ideal, revealed by this conservation of human life, is the greatest justification of the radical departure of the new asylum from the earlier, and now antiquated, methods of institution life."

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.
ABSTRACT OF VITAL STATISTICS, JANUARY, 1915.
COMPILED BY WILLIAM F. FULGRAFF, REGISTRAR.

Deaths.

Consumption	32
Typhoid fever	1
Scarlet fever	1
Measles	0
Whooping cough	0
Diphtheria and croup	1
Grippe	2
Diarrheal diseases	3
Pneumonia	13
Broncho-pneumonia	9
Bright's disease	17
Apoplexy	11
Cancer	15
Accidents and violence	7
Deaths under one year	21
Deaths over 70 years	37
Total deaths	180
Death rate	19.26
Death rate less non-residents	15.84

Deaths in Institutions.

	Resident	Non-Resident
Albany Hospital	11	11
County House	0	2
Home for the Friendless	0	1
Homeopathic Hospital	4	8
Little Sisters of the Poor	1	3
Penitentiary	1	0
Public Places	0	3
St. Margaret's House	1	1
St. Peter's Hospital	7	9
Maternity Hospital	1	5
Federation Camp	1	0
Albany Hospital Camp	4	7
	31	50

Births	169
Still births	6

TUBERCULOSIS.

Bender Laboratory Report on Tuberculosis.

Positive	6
Negative	57
Total	63

Living cases on record January 1, 1915		377
Cases reported:		
By card	33	
Dead cases by certificate	11	
		44
Total		421
Dead cases previously reported	21	
Dead cases not previously reported	11	
Removed	1	
		33
Living cases on record February 1, 1915		388
Total tuberculosis death certificates filed during January		32
Non-resident deaths:		
C. F. L. Pavilion	1	
Albany Hospital	1	
Hospital for Incurables	1	
Penitentiary	1	
		4
Resident deaths		28

Report of Visiting Tuberculosis Nurse.

Old cases	19
New cases	19
Returned from hospitals	8
Total	46
Disposition of cases:	
Died	4
Sent to hospitals	21
To general tuberculosis nurse	10
Lost track of	0
Remaining under treatment	11
Total	46

Visits made	26
Visits made, old cases	160
Calls at Board of Health office	27

Bureau of Contagious Disease.

Cases Reported.

Typhoid fever	7
Scarlet fever	41
Diphtheria and croup	16
Chickenpox	48
Measles	4
Whooping-cough	10
Tuberculosis	43
Total	169

Communicable Disease in Relation to Schools.

	Reported	
	D.	S. F.
Public School No. 2	..	1
Public School No. 5	..	1
Public School No. 7	..	2
Public School No. 10	..	1
Public School No. 12	..	1
Public School No. 14	..	4
Public School No. 17	..	1
Public School No. 18	1	..
Public School No. 21	1	..
Public School No. 22	..	1
Public School No. 24	..	1
High School	..	2
New York State Normal College	2	..
Albany Boys Academy	..	1
St. Joseph's Academy	..	2
Cathedral School	..	2
Lady of Angels School	..	3
St. Ann's School	..	1

Number of days quarantine for diphtheria:
Longest...... 18 Shortest...... 7 Average...... 12 3/5
Number of days quarantine for scarlet fever:
Longest...... 49 Shortest...... 30 Average...... 35
Fumigations:
Houses.................. 70 Rooms.................. 330

Cases of diphtheria reported	16
Cases of diphtheria, antitoxin used	15
Cases of diphtheria, antitoxin not used	1
Deaths after use of antitoxin	1

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria.

Initial positive	26
Initial negative	479
Release positive	11
Release negative	80
Suspicious	4
No growth	1
Total	601

Test of Sputum for Tuberculosis.

Initial positive	6
Initial negative	57
Unsatisfactory	1
Total	64
Widal Tests:	
Positive	3
Negative	18
Total	21
Milk examinations	27

BUREAU OF MARKETS AND MILK.

Public market inspections	18
Market inspections	123
Fish market inspections	7
Rendering house inspections	1
Packing house inspections	1
Slaughter house inspections	4
Milk depots inspected	14
Milk depots deficient	3
Milk wagons inspected	25
Milk cans inspected	84
Milk cans unclean	12
Lactometer tests	15
Temperature tests	15
Sediment tests	7
Fat tests	31
Fats tests below standard	3
Bacterial counts	25
Condensed milk condemned, cans	144
Pork condemned, pounds	20

MISCELLANEOUS

Work certificates issued to children	9
Number of complaints of nuisances	36
Privy vaults	0
Closets	4
Plumbing	10
Other miscellaneous complaints	22
Number of dead animals removed	337
Cases assigned to health physicians	100
Calls made	201

Medical News

Edited by Arthur J. Bedell, M. D.

ALBANY GUILD FOR THE CARE OF THE SICK.—DEPARTMENT OF VISITING NURSING.—STATISTICS FOR JANUARY, 1915.—Number of new cases, 193; classified as follows: Dispensary patients receiving home care, 20; district cases reported by health physicians, 2; charity cases reported by other physicians, 50; moderate income patients, 85; metropolitan patients, 36; old cases still under treatment, 659; total number of cases under nursing care during month, 852. Classification of diseases for the new cases: Medical, 33; surgical, 10; gynecological, 8; obstetrical under professional care, mothers 49, infants 48; eye and ear, 3; skin, 2; throat and nose, 1; dental, 0; infectious diseases in the medical list, 39. Disposition: Removed to hospitals, 24; deaths, 15; discharged cured, 79; improved, 29; unimproved, 3; number of patients still remaining under care, 702.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 2; students in attendance, 8; nurses in attendance, 4; patients carried over from last month, 0; new patients during month, 9; patients discharged, 5; visits by head obstetrician, 1; by attending obstetrician, 5; by students, 33; by nurses, 66; total number of visits for this department, 105.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 1,279; for professional supervision of convalescents, 557; total number of visits, 1,836; visits to pay cases, 824; to charity cases, 455; unrecorded visits, 557; cases reported to the Guild by 5 health physicians and 44 other physicians; graduate nurses 8, certified nurses 1, pupil nurses 7 on duty.

Dispensary Report.—Number of clinics held, 76; new patients, 152; old patients, 331; total number of patients treated during month, 483. Classification of clinics held: Surgical, 11; nose and throat, 2; eye and ear, 12; skin and genito-urinary, 7; medical, 11; lung, 9; dental, 0; nervous, 3; stomach, 4; children, 10; gynecological, 7.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY.—The regular monthly meeting of the Medical Society of the County of Albany was held at the Elks Club, Friday evening, February 12th, 1915, at 8.45 P. M. The following program was read: Symposium on Tumor of the Brain. "Symptomatology and Diagnosis," Dr. LaSalle Archambault; "Pathological Anatomy," Dr. Wardner D. Ayer; "Surgical Treatment," Dr. Davis Baker.

ALUMNI ASSOCIATION OF THE ALBANY MEDICAL COLLEGE.—A meeting of the Executive Committee of the Alumni Association of the Albany Medical College was held at the College, Monday, February 9th, at 4 P. M.

MEDICAL SOCIETY OF THE COUNTY OF SCHENECTADY.—A regular meeting of the Medical Society of the County of Schenectady was held in the rooms of the Society in the County Court House, on Tuesday evening, February 9, 1915, at 8.30 P. M. Scientific program: "Surgical Germicides," Dr. Ellice McDonald, New York City. Discussion to be led by Dr. C. G. McMullen, Dr. E. MacD. Stanton and Dr. E. J. Wiencke. "A Review of 1,000 Cases of Obstetrics in Private Practice," Dr. J. H. Collins. Discussion to be led by Dr. Ellice McDonald, Dr. Paul T. Harper and Dr. R. G. Holt.

SARATOGA SPRINGS MEDICAL SOCIETY.—A meeting of the Saratoga Springs Medical Society was held at the Business Men's Association rooms on Friday evening, February 26th, at 9 P. M. Reports of cases were presented by Drs. Ahearn, Comstock, Fish, Humphrey, Ledlie, Leonard and Moriarta.

THE ANTHONY N. BRADY MATERNITY HOSPITAL.—Through the beneficence of the late Anthony N. Brady a model maternity hospital has been erected on Main Avenue, Albany, N. Y. The institution was formally opened on February 10, 1915, and will be conducted by the Sisters of Charity.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.—The hundred and ninth annual meeting of the Medical Society of the State of New York will be held in Buffalo, April 27-29. On account of the European war this will probably be the largest medical meeting of the year, except perhaps that of the American Medical Association in San Francisco. Through the co-operation of the military authorities, the meeting will be held in the 65th Regiment Armory which is one of the largest in the country and will afford accommodations for all activities of the meeting, except the annual banquet. On the last night of the meeting a regimental parade and review by Gen. Gorgas will be held.

PHILIPPINE CIVIL SERVICE EXAMINATION, MARCH 2, 1915.—The United States Civil Service Commission announces an open competitive examination for medical inspector and surgeon, for men only. From the register of eligibles resulting from this examination certification will be made to fill a vacancy in this position in the Philippine Service, at a salary of $3,000 a year, and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

The duties of the position will be to take charge of the health station at Manila or in the Provinces, as the Philippine Director of Health may require, and to attend to such surgical work as may be assigned in the Philippine General Hospital, probably the best institution of its kind in the Eastern Hemisphere, with 350 beds and an equipment comparing favorably with that of any hospital in the world. The new conditions, and the as yet undescribed diseases, that are constantly encountered furnish a wide field to one interested in his profession. As a further aid to his work the Bureau of Science, which is on the hospital grounds, has one of the largest and most favorably known research laboratories in existence.

Competitors will not be assembled for examination, but will be rated on the following subjects, which will have the relative weights indicated:

Subjects	*Weights.*
1. Education. . .	40
2. Experience. . .	40
3. Publications. . .	20
Total	100

Graduation in medicine from a medical school or college of recognized standing and at least three years' experience in surgical hospital practice are prerequisites for consideration for this position.

Statements as to education and experience are accepted subject to verification.

Applicants must not have reached their fortieth birthday on the date of the examination.

The medical certificate on Form B. I. A. 2 should be executed by some medical officer in the service of the United States. Applicants should appear before medical officers of the Army, Navy, Indian Service, or Public Health Service. If such officer can not be conveniently visited, a pension-examining surgeon may execute the certificate. Special arrangements have been made with pension-examining boards throughout the country to give such examination for a fee of $2. to be paid by the applicant. The medical officer should indicate his rank or official designation on the certificate. When it is impracticable for an applicant to appear before a Government physician or a pension-examining surgeon, to have the medical certificate executed, on account of his distance from such a physician, the medical certificate may be executed by any reputable physician other than the family physician of the applicant; but a person submitting such a certificate may be required to undergo another physical examination in case of appointment.

Each applicant will be required to submit with his application an unmounted photograph of himself taken within two years. Tintypes will not be accepted.

Special attention is invited to the favorable conditions in respect to transportation, leave of absence, clothing, etc., in this service, printed hereon.

This examination is open to all men who are citizens of the United States and who meet the requirements.

Persons who meet the requirements and desire this examination should at once apply for Forms B. I. A. 2 and 2095, stating the title of the examination for which the forms are desired, to the United States Civil Service Commission, Washington, D. C.; the secretary of the United States Civil Service Board, post office, Boston, Mass., Philadelphia, Pa., Atlanta, Ga., Cincinnati, Ohio, Chicago, Ill., St. Paul, Minn., Seattle, Wash., San Francisco, Cal.; customhouse New York, N. Y., New Orleans, La., Honolulu, Hawaii; old customhouse, St. Louis, Mo.; or to the chairman of the Porto Rican Civil Service Commission, San Juan, P. R. No application will be accepted unless properly executed, including the medical certificate, and filed with the Commission at Washington, with the material required, prior to the hour of closing business on March 2, 1915. The exact title of the examination as given at the head of this announcement should be stated in the application form.

Philippine Civil Service Examination, March 2, 1915.—The United States Civil Service Commission announces an open competitive examination for specialist in mental and nervous diseases, for men only. From the register of eligibles resulting from this examination certification will be made to fill a vacancy in this position in the Philippine Service at a salary of $3,500 a year, with subsistence, quarters, and laundry, and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

The duties of this position will be to organize and administer an insane asylum to be located on an estate of 600 acres, to exercise general supervision over the farm work, and to train a staff of nurses and attendants for this special work.

Competitors will not be assembled for examination, but will be rated on the following subjects, which will have the relative weights indicated:

Subjects	*Weights.*
1. Education	40
2. Experience	40
3. Publications	20
Total	100

Graduation from a medical school or college of recognized standing and at least two years' experience in hospitals or institutions for the insane are prerequisites for consideration for this position.

Statements as to education and experience are accepted subject to verification.

Applicants must not have reached their fortieth birthday on the date of the examination.

The medical certificate on Form B. I. A. 2 should be executed by some medical officer in the service of the United States. Applicants should appear before medical officers of the Army, Navy, Indian Service, or Public Health Service. If such officer can not be conveniently visited, a pension-examining surgeon may execute the certificate. Special arrangements have been made with pension-examining boards throughout the country to give such examination for a fee of $2, to be paid by the applicant. The medical officer should indicate his rank or official designation on the certificate. When it is impracticable for an applicant to appear before a Government physician or a pension-examining surgeon, to have the medical certificate executed, on account of his distance from such a physician, the medical certificate may be executed by any reputable physician other than the family physician of the applicant; but a person submitting such a certificate may be required to undergo another physical examination in case of appointment.

Each applicant will be required to submit with his application an unmounted photograph of himself taken within two years. Tintypes will not be accepted.

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Philippine Civil Service Examination, March 2, 1915.—The United States Civil Service Commission announces an open competitive examination for bacteriologist and pathologist for men only. From the register of eligibles resulting from this examination certification will be made to fill vacancies in this position, Bureau of Science, Manila, P. I., at salaries ranging from $2,000 to $2,500 a year, and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

The duties of this position will be to carry on research work in the laboratories of the Bureau of Science, combined with the regular routine bacteriological and pathological work.

Competitors will not be assembled for examination, but will be rated on the following subjects, which will have the relative weights indicated:

Subjects	*Weights.*
1. Education	40
2. Experience	40
3. Publications or thesis	20
Total	100

The degree of M. D. or Ph. D. from a college or university of recognized standing, including at least one year's training in bacteriological laboratory work, is a prerequisite for consideration for this position.

Applicants should have a knowledge and training in immunity and serum therapy.

Under the third subject a thesis may be submitted in lieu of or in addition to publications. If such a thesis is submitted it must present the result of the applicant's own research work in the subject of bacteriology or pathology.

Statements as to education and experience are accepted subject to verification.

Applicants must not have reached their fortieth birthday on the date of the examination.

The medical certificate on Form B. I. A. 2 should be executed by some medical officer in the service of the United States. Applicants should appear before medical officers of the Army, Navy, Indian Service, or Public Health Service. If such officer can not be conveniently visited, a pension-examining surgeon may execute the certificate. Special arrangements have been made with pension-examining boards throughout the country to give such examination for a fee of $2, to be paid by the applicant. The medical officer should indicate his rank or official designation on the certificate. When it is impracticable for an applicant to appear before a Government physician or a pension-examining surgeon, to have the medical certificate executed, on account of his distance from such a physician, the medical certificate may be executed by any reputable physician other than the family physician of the applicant; but a person submitting such a certificate may be required to undergo another physical examination in case of appointment.

Special attention is invited to the favorable conditions in respect to transportation, leave of absence, clothing, etc., in this service.

This examination is open to all men who are citizens of the United States and who meet the requirements.

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THE AMBULANCE CONSTRUCTION COMMISSION.—This is the first great war in which field motor-ambulances have been extensively used. It was inevitable that many defects should be found in existing types, and in various quarters experts began to ask whether something could not be done to standardize the patterns and to improve the type. At the instance of Mr. Henry S. Wellcome, the founder of the Wellcome Bureau of Scientific Research, a Commission has been formed, and the names of members show at once that the matter is regarded as of first importance by those most intimately connected with the welfare of the wounded soldier.

Sir Frederick Treves, whose long experience and distinguished service specially fit him for the task, has consented to be the Chairman. The Admiralty is represented by the Director-General of the Medical Department, R. N., while the Quartermaster-General to the Forces and the Acting Director-General, Army Medical Service, represent the War Office. The British Red Cross Society is, of course, represented by Sir Frederick Treves, and the St. John Ambulance Association by Sir Claude Macdonald and Sir John Furley. The remaining members are all experts. This Commission will first and foremost act as a judging committee for the award of prizes of the value of £2,000, provided by the Wellcome Bureau of Scientific Research. These prizes are offered for the best designs of an ambulance-body which shall fit a standard pattern motor-chassis for field motor ambulances. The last day for the receipt of competing designs is June 30, 1915. It is hoped that the competition will bring in a number of ingenious designs, from which the ideal field ambulance-body will be evolved.

It may be asked why the competition is restricted to designs for a body and not for the complete ambulance, including a chassis. The reason is that a chassis takes much longer to build than a body, and that, when war breaks out, it is impossible to get at short notice anything like a sufficient number of any one type of chassis. On the other hand, a standardized body to fit any chassis of approved dimensions can be constructed in numbers at comparatively short notice. And a perfected body is badly wanted to insure complete comfort for the wounded.

It is hoped that the information obtained by the competition, and in other ways, will be published in some permanent form, available for future reference. Probably in addition to one design of special excellence, there will be submitted various ingenious suggestions which may be incorporated in the pattern design approved by the Commission. For these, a portion of the prize-money has been set apart. The first prize is of one thousand pounds, the second of five hundred, and the third of three hundred pounds. All details of conditions may be obtained from the Secretary, the Ambulance Construction Commission, 10 Henrietta Street, Cavendish Square, London, W. The competition is open to citizens of all nations.

THE ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH.—On the Rochambeau, sailing February 20, 1915, was Miss Katharine Lilly, head nurse of the Department of Surgery of the Rockefeller Institute for Medical Research. She went with a detachment of nurses being sent by the American Red Cross to the American hospital at Yvetot.

Miss Lilly herself goes to France for the especial purpose of assisting Dr. Alexis Carrel, of the Rockefeller Institute for Medical Research. Dr. Carrel now has been detached from work at the Lyons hospital and placed by the French Government in charge of a hospital at Compeigne, which is near the northern line of battle.

For the use of the patients in charge of Dr. Carrel and his assistants, the Government has requisitioned a hotel which has been converted into a hospital with accommodations for about one hundred persons. The Government will provide administrative officers as well as competent surgeons suggested by Dr. Carrel, to carry on the regular work, thus leaving Dr. Carrel free to perform his characteristic operations especially in the line of transplanting tissues blood vessels and nerves and blood transfusion, and to conduct the laboratory studies which are about to be undertaken.

In order that the work under Dr. Carrel may not only be of the greatest effectiveness at the moment, but may be made permanently available to the world of science, the Rockefeller Institute is equipping Dr. Carrel's hospital with complete apparatus for research in the bacteriological, pathological, chemical and surgical conditions which may arise.

Dr. Carrel, who was spending his vacation in France at the outbreak of the War, immediately offered his services to the French Government, which were accepted. He was detailed to the military hospital at Lyons, at which there were referred to him especially the wounded with injured blood vessels and nerves, in view of the research work which he had done in these classes of injuries. From the application of the method which he discovered for suturing and transplanting blood vessels and tissue, it was possible to save limbs which otherwise would have inevitably been lost. Dr. Carrel has now been given special facilities as near as possible to the line of battle, because of the unusual conditions which have developed in this conflict incident to trench warfare.

It had been supposed that all future wars would yield small numbers of infected wounds. The facts, however, are that no previous war has yielded such a large number of infected wounds as the present one.

The reasons for this under the old conditions are developed to be as follows: poor hygienic facilities, infection of the wounds caused by the surgeons who carried the infecting germs on the operating instruments, dressings, etc., the introduction of infected material from without at the time of injury, were the sources of infection. In the present case the infections occur because the injured in trenches receive their injuries from missiles which carry dirt and soiled clothing into wounds; and also because in many cases it is days before the injured can be removed. The infections have also been of an unusual character. Formerly they were usually suppuration and pus formation. Now they are commonly due to the development of gas in the tissues and to tetanus, or lock-jaw.

This gas infection is very serious in form. It originates in bacteria of the soil, particularly soil which has been under a high state of cultivation for a long period of years. The technological term applied to the condition is gaseous phlegmon. The bacteria which cause it do not grow except in the absence of atmospheric air which the injured tissues provide. In their growth they break up the constituents of the tissues and impart a gas in which hydrogen forms a large part. This gas penetrates the tissues and carries the infected material further and further and may penetrate into the blood, when it soon causes rapid death.

Hitherto this class of infection has been so rare that adequate means for its prevention and cure have hardly been worked out. It is in order that he might have access to this class of cases, now, unfortunately, so numerous, that Dr. Carrel has been transferred to the northern field of war. It is in order that, in addition to the regular routine work of the care of the wounded, he may study these infections especially, he is being provided by the Rockefeller Institute for Medical Research with the medical equipment requisite for this work.

In carrying out the enormous work incidental to military operations, one government alone could hardly undertake at this critical period to organize hospitals and laboratories for conducting research work. They must be quite content to deal with conditions as they arise. It is just there that Dr. Carrel's peculiar qualifications come in, and in that respect that the contribution of the Rockefeller Institute is largely made.

Hence it is that he is to have a staff consisting of bacteriologists, chemists and technicians, forming a laboratory unit in addition to the regular surgical unit of the hospital. He is fortunate in being joined by Dr. H. D. Dakin, who has been for many years in this country and has a distinguished reputation as a chemist. He has been assigned to take charge of the chemical part of this humane work of investigation.

The Rockefeller Foundation has just voted an appropriation of $20,000, to be used under the direction of the Rockefeller Institute, in furthering medical research work under war conditions.

The Institute has had many appeals made to it for serum for use in the treatment of meningitis and dysentery, and these serums have been distributed freely.

PAROLE OF THE INSANE.—The State Charities Aid Association reports that the reorganization of the parole system in the fourteen state hospitals for the insane has saved the state $87,000 in a year. Under this system many patients are returned to their homes and are frequently examined by medical experts. It is found that frequently the home environment has proved beneficial and as the cost of maintenance of each patient is $200 per annum, this means a considerable saving to the state. The association advocates a judicious extension of the system.

ANTIVACCINATION MEASURE.—The Jones-Tallett bill which opposes the compulsory vaccination of school children except when there is an epidemic of smallpox in the locality of the school has been up for hearing. It is reported that Health Commissioner Herman M. Biggs, New York City and other officials favored the measure while many physicians from all parts of the state came to Albany to oppose its passage. Among those opposing the bill were Dr. Lewis K. Neff, New York City chairman of the legislative committee of the State Medical Society, Dr. William J. Cruikshank, Brooklyn, representing the Kings County Medical Society; Dr. Abraham Jacobi, New York City, and Dr. Franklin C. Gram, Buffalo.

TETANUS ANTITOXIN FOR EUROPE.—At a lecture before the New York Academy of Medicine, February 4th, Dr. Matthias Nicoll, Jr., announced that New York City is sending 2,000,000 units of tetanus antitoxin each month to the warring nations in Europe.

PERSONAL.—Dr. JAMES J. YORK (A. M. C. '09), is now located at 622 State St., Schenectady, N. Y.

REMOVAL.—Dr. HOWARD A. LAMOURE (A. M. C. 1900), is Medical Superintendent of the Colorado Insane Asylum at Pueblo, Cal.

DIED.—Dr. HERCULE DANSEREAU (A. M. C. '53), died at Thibodeaux, La., Jan. 2, 1915.

—Dr. JOHN W. COBB (A. M. C. '58), a surgeon of volunteers during the Civil War, died at his home in Binghamton, N. Y., Jan. 14, 1915, from pneumonia, aged 76.

—Dr. CHARLES T. MONTGOMERY (A. M. C. '74), a member of the Medical Society of the State of New York and one of the best known practitioners of Ulster County died at his home in Saugerties, N. Y., Jan. 15, 1915, from arterio-sclerosis, aged 65.

—Dr. JAMES T. HARD (A. M. C. '77), resident physician of the Mary M. Packer Hospital, Sunbury, Pa., died at his home Jan. 12, 1915, from erysipelas, aged 65.

—Dr. WILLIAM J. SHEEHAN (A. M. C. '97), died in New York, Jan. 14, 1915.

—Dr. THOMAS CARNEY (A. M. C. '02), Schenectady, N. Y., died at Johns Hopkins Hospital, Baltimore, Md., Feb. 6, 1915, from ulcers of the stomach, aged 38. Dr. Carney was a Spanish War veteran.

—Dr. FRANK A. SEARLE (A. M. C. '14), an interne for one year at the Albany City Hospital, died Jan. 20, 1915, after a severe illness of four weeks.

In Memoriam

CHARLES T. MONTGOMERY, M. D.

Dr. CHARLES T. MONTGOMERY, one of the best known physicians in Ulster county, New York, died at his home in Saugerties, January 15, 1915, after a long illness from Bright's disease.

Dr. Montgomery was born at Big Hollow, Greene county, N. Y., on February 17, 1849, a son of Dr. Thomas E. Montgomery, who was a native of Delaware county and a graduate of Geneva Medical College. After various employments as clerk, during his boyhood, Dr. Montgomery decided to study medicine with his father, incidentally teaching the district school in order to earn money to enter the Albany Medical College. He graduated in 1874 and was appointed house physician at the Albany City Hospital, remaining there a year. Dr. Montgomery then began the practice of medicine in Glasco and in 1880 married Miss Catherine M. Maginnis, a daughter of William Maginnis. He was a man of unusual energy, and faithful to the exacting demands of country practice. His professional obligations soon extended to all parts of northern Ulster and without a doubt he enjoyed the largest practice of any doctor in that part of the county. It was not unusual for him to have ten horses for constant use at night or day. A few years ago he moved to Saugerties, where he had since resided. Dr. Montgomery also became interested in the manufacturing firm of Montgomery & Washburn of Saugerties. He was a man of big heart and gave of his time and money to relieve any worthy case which was brought to his attention. He was a liberal supporter of churches and philanthropic institutions.

HORACE RENNIE POWELL, M. D.

Upon December 30, 1914, death again entered our ranks and claimed our esteemed associate and member, Dr. HORACE RENNIE POWELL. His death was unexpected, having been preceded by an illness of but a few hours, and the shock of this sudden taking away of one of our respected and prominent members leaves a lasting imprint upon our minds and indicates more keenly than in any other way how insecure and uncertain our hold upon life is.

Dr. Powell was born at Coeymans, N. Y., on February 16, 1860, his father being John S. Powell, a prominent educator of our country, and his mother, Rachel A. Powell, was a descendant of one of the early settlers of Long Island. Dr. Powell was the only child of his parents, and they both lived to see him develop into a prominent and successful physician and to enjoy his success in life. His father died in 1895. His mother is still living.

During boyhood Dr. Powell attended the public schools of his native place, and then the Albany Normal School, from which he graduated. For a short time he was interested in the drug business, but in 1878, ambitious to become a physician, he entered the Albany Medical College and began the study of medicine,—his preceptors being Prof. Albert Van der Veer and the late Norman L. Snow. In 1882 he graduated from the Albany Medical College with honor and as valedictorian of his class. In the spring of the same year he located at Housatonic, Mass., but remained there only a short time. He then located in Poughkeepsie where he speedily gained a large practice and did his life's work. In 1883 he maried Miss Idell H. Champlin. Of this marriage there are two children, Robert Carlyle Powell, now secretary of the Maryland Tuberculosis Commission, and Mrs. Vera T. Graham.

Dr. Powell possessed a genial nature and a hearty interest in everything that appertained to his profession, but aside from this he was also interested in all matters of a literary and intellectual character, and he was a citizen in the fullest sense of the word. As a mark of his citizenship, we recall the fact that he has occupied the position of Health Officer of his city, and he was for many years a member and at one time President of the Board of Education. In 1892 his Alma Mater honored him with the presidency of the Alumni Association of the Albany Medical College. His interest in the Association was intense and sincere, and for many years that interest led him to give a prize to be awarded to the third year student obtaining the highest number of marks upon final examination.

He was a member of the Dutchess County Medical Society, the Medical Society of the State of New York, the American Medical Association, as well as many other medical organizations.

Dr. Powell was distinctly a man of his word, and in all of his career as a professional man no blot lies upon his honesty nor the integrity of his character, and no man could have been more sincere nor more interested in his work. To his friends he was most loyal, and his life was one long sacrifice to cure and alleviate the sufferings of humanity. His early and untimely death was caused by his strenuous application to professional work. In his death we have lost a friend, the community has lost a good citizen and an honest, self-sacrificing, skilled physician.

J. E. SADLIER.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

The Intervertebral Foramen. An Atlas and Histologic Description of an Intervertebral Foramen and its Adjacent Parts. By HAROLD SWANBERG, Member American Association for the Advancement of Science. With an introductory note by Prof. Harris E. Santee. Chicago, Scientific Publishing Co., Chicago, Illinois.

The author states that the purpose of this book is to present an accurate and scientific description of the intervertebral foramen and its adjacent parts, with special reference to the relation of the nervous structures. The animal chosen to furnish the necessary specimen was the cat.

His descriptions appear to be very accurate and the illustrations are fairly satisfactory. The book apparently is written as a guide to those who believe that the great majority of diseases have their origin from various spinal abnormalities which are supposed to result in producing pressure or other phenomena, to the nerves in the intervertebral foramen. To those particularly interested in spinal therapeutics the book may prove of interest and value. G. E. B.

Modern Surgery: General and Operative. By J. CHALMERS DACOSTA, M. D., Samuel D. Gross, Professor of Surgery, Jefferson Medical College, Philadelphia, Pa. Seventh edition, revised, enlarged and reset. Octavo of 1,515 pages, with 1,085 illustrations, some of them in colors. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $6 net; half morocco, $7.50 net.

This work on surgery, which has undoubtedly been one of the best single treatises upon the subject, has run through seven editions in twenty years. The present volume contains 41 chapters, of 1,515 pages, and is a clear and concise treatise of all of the principal surgical conditions, including general or fundamental surgery. It is in my opinion the most complete and valuable single volume on surgery in the English language. The present edition is thoroughly up to date in every respect. It is a work which every student and practitioner, physician as well as surgeon, would find of great value. GEORGE E. BEILBY.

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Original Communications

TRUE AND FALSE ECONOMY IN THE CARE OF THE INSANE.

Read at New York State Conference of Charities and Corrections, Utica, November 17, 1914.

BY THOMAS W. SALMON, M. D.,

Medical Director National Committee for Mental Hygiene.

We are constantly reminded of the great cost of caring for the insane. We know that New York spends more for this purpose than it does for anything else except education. The appropriations for the care of the insane last year amounted to $6,400,000, a sum exceeding the total amount appropriated for the executive and legislative departments, all other State charities, the department of health, the militia, the courts, and the prisons and reformatories. The amount needed for this purpose is constantly increasing and it is certain that before many years it will reach $10,000,000.

No one can deny the necessity of economy in the expenditure of every dollar of this enormous sum, but we should go still further and insist that the kind of economy which governs this great humanitarian enterprise should be that which considers the future as well as the present and which deals with the whole problem of mental diseases rather than with its institutional phases alone. It is the purpose of this paper to point out a few of the considerations which true economy must take into account.

The Cost of Not Caring for the Insane.

Every insane person in this State is a source of expense or economic loss whether he is a patient in a State hospital or is living at home in the community. We are sometimes led to set up false standards of economy by overlooking this important fact.

Perhaps some of the elements in the cost of not caring for the insane can be illustrated by a concrete example:

Mrs. F. is a "practical nurse" who used to earn from $12.00 to $15.00 a week in caring for confinement cases among persons of moderate means. Her husband had regular and well-paid employment running a hoisting engine for a construction company until he had his skull fractured by a piece of rock from a blast. Their combined earnings enabled them to maintain a good home and to keep their children in school. A long convalescence from this injury was followed by changes in Mr. F's mood and conduct. His habits of moderation in the use of alcohol gave place to intemperance, he became sullen, morose and taciturn, and finally he became controlled by delusions of infidelity regarding his wife. He suspected his daughter of immorality and practically all his conversation was devoted to these two topics. He continually threatened his wife and daughter and once he attacked the girl.

It became unsafe to leave Mr. F at home alone and so his wife gave up nursing and secured employment as a cleaner in an office building where she worked from 6 until 9 every evening and from 5 until 8:30 in the morning for $9.00 a week. She was thus able to be at home during the day and take care of her husband, her daughter relieving her when she came home at six in the evening from an office in which she was employed. The economic level of the family was greatly lowered and home life became unendurable. With a mistaken idea of duty which blinded her to her husband's real interests and made her quite unmindful of her obligations to her children, Mrs. F. refused to take steps for his commitment until it seemed likely that the neighbors would complain. Then he was committed to the Manhattan State Hospital.

The removal of Mr. F from his family wholly transformed their home life. Mrs. F has resumed her former occupation (thereby nearly doubling her earnings) and the daughter can seek recreation outside the house or invite her young friends to it.

The admission of Mr. F added one more individual to the 34,701 patients for whom provision is made in the State hospitals for the insane and it added $206.09 to the yearly cost of caring for them, but it is undeniable that the rehabilitation of this family resulted in a distinct net gain to society. This case illustrates only one element of the cost of mental diseases in the community. Other important sources of expense and economic loss are the anti-social acts committed by those whose minds are diseased. Although by far the worst consequences of insanity are the innumerable family tragedies for which mental diseases are responsible, insanity constitutes an important cause of crime and of less serious anti-social acts. The attempts upon the lives of Mayor Gaynor, Mayor Mitchel, and Colonel Roosevelt were all made by men who not only were insane but who were known by friends and relatives to be insane before they committed these murderous attacks.

It is absolutely necessary for us to count the cost of some of these consequences of insanity in the community if we are to determine what is true economy and what is false economy in the care of the insane. Unless we take these consequences into consideration it is impossible, for instance, to estimate the advantage of establishing out-patient departments for treatment of mental diseases in connection with the State hospitals. It is certain that these new facilities for the early treatment of mental diseases will result in the admission of more patients for, although curable cases will be brought to light and prevented from admission by effective treatment in the earlier stages of their disease, a greater number of incurable cases (like that of Mr. F) will undoubtedly come to attention who require admission to State hospitals and who, but for this means of detection, would remain for years unnoticed or neglected in their homes. To offset the increase in the admission rate which is certain to follow the general establishment of out-patient departments, we have the large number of convalescent patients who can be discharged safely if they receive dispensary treatment subsequently but who, under other circumstances, would have to remain for indefinite periods in the hospitals. So, in order to determine whether or not it is economical for the State to undertake the dispensary treatment of mental disease it is necessary for us to see the State's relation to the *whole* problem of insanity—not merely to those phases of it which are dealt with inside the walls of the State hospitals.

It seems worth while, therefore, to examine some other features of the State care of the insane from this point of view, for it is only with these broader considerations in mind that we can be certain what is true economy and what is not.

I have tried to show, merely as an illustration, that it is true economy to establish out-patient departments in connection with the State hospitals. The whole question of the State's relation to phases of insanity which seem, at first glance, to be of importance only to the communities is beginning to receive serious consideration. It is impossible to do more than touch upon this question here, but I want to make the statement that there is no more promising field for true economy in the care of the insane than that of after-care. The " front doors " of the hospitals—those through which patients are admitted—are being opened more widely every day by such factors as better commitment laws, dispensaries for mental diseases and popular realization of the importance of securing the earliest possible treatment for these diseases. The " back doors " of the hospitals—those through which patients are discharged to the community—can be opened more widely than they are by efficient and continuous after-care. The State Charities' Aid Association has shown the value and practicability of after-care for the insane and now it is time for the State to engage in it seriously and with the appropriation needed to insure success. Instead of extending this work, however, which is in the highest degree economical as well as humane, the last Legislature nearly wiped out what had already been established in order to effect a reduction of less than $5,000 in an appropriation bill, and this was done in the interests of " economy."

Expert Guidance in the Care of the Insane.

The treatment of mental diseases is the greatest enterprise in which the State is engaged. It is an enterprise in which the State has a practical monopoly, for the number of insane persons treated in all private sanitariums in the State is only 1,000. It is not only the greatest enterprise carried on directly by the State but it is the greatest *medical* enterprise carried on within the borders of the State for the number of beds in the State hospitals for the insane is larger than the total number in all other hospitals in the State. The responsibility for this undertaking is placed by law upon the State Hospital Commission, under whose immediate direction more than $6,000,000 is spent every year. Surely, true economy would demand that expense should not be spared in providing the best scientific leadership in this enterprise, but, although no issues come before the State Hospital Commission in which the medical aspects are not the most important ones, there are but two physicians employed in that body. One is a member of the Commission, who receives $7,500 a year, and the other is the Medical Inspector, who receives $4,500 a year. The duty is placed upon these two physicians of inspecting all public and private institutions for the insane and all institutions in which the alleged insane are kept. Upon them depends to a large extent the medical standards of the State service and the kind of treatment which 35,000 sick persons receive. They must exercise oversight over the sanitation of the fourteen communities of respectable size which the State hospitals constitute. They must personally examine the 6,000 patients admitted each year in order to determine that all are rightly held for treatment. They conduct examinations for the promotion of physicians in the State Hospital Service and the Medical Commissioner is one of the three editors of the *State Hospitals Bulletin,* a scientific journal of high rank. They must have oversight over the extensive statistical researches carried on by the State Hospital Commission. All these things and many others must be done by these two physicians, without even the aid of an advisory board such as is provided for the State Department of Health.

Is it not absurd to economize by limiting the number of those able to furnish expert guidance for these great medical undertakings? The inspecting staff alone should consist of at least five persons. One should devote himself wholly to the examination of new cases admitted, one should be the chief of the Bureau of Deportations and Discharges, one should be the sanitarian of the Commission and one should conduct all the inspections of institutions, while another should devote his time to broad studies of the difficult problems which the care of the sick upon this enormous scale involves. The cost of such a plan for expert leadership in the State's principal undertaking would not be more than $25,000 a year. The appropriation of $25,000 for this purpose would be true economy in the strictest sense of the words, but, far from taking steps toward the adoption of such a plan, the Legislature recently repealed the wise provision of the law which made the expert member the President of the State Hospital Commission and reduced the salary of the single Medical Inspector.

Other Features in the Care of the Insane.

If the time at my disposal permitted it, I would like to discuss many other instances in which false economy has resulted from failure to recognize the fact that there are more aspects to the care of the insane than those apparent in the yearly estimates for the maintenance of State hospitals. Only three, unfortunately, can be considered here.

Politics.

For many years the care of the insane in this State has been kept outside the field of practical politics, but during the three last administrations important positions have been filled chiefly with reference to what could be accomplished in building up or repairing several different State political machines and wholly without reference to the effect of such appointments upon the important and difficult work of this Department. If there is any place in which the greedy hand of party politics has no place, it is in the care of the sick. The fresh trail of the politicians through the charitable activities of this State is like the path of an invading army and it is a shameful fact that parts of this trail were blazed by a Commission which unblushingly bore the word "economy" upon its letterheads.

Scientific Research.

It is true economy for the State to foster scientific research into the causes of mental diseases, their treatment and the conditions which influence their prevalence, yet the splendid work of the State Psychiatric Institute, in which these problems are studied narrowly escaped being hopelessly crippled last winter on the plea of economy.

Division of the Burden of Caring for the Insane.

New York assumed responsibility for full State care in 1897. This step was the completion of a movement for better provisions for the insane which has served as an inspiration to many other States. County care, with all the evils which are inseparable from it, will doubtless never be tolerated again in New York, but new ideals in treatment have opened new fields of usefulness in which it seems that cities and the larger towns have a well-defined share. The importance of early treatment for mental diseases is more clearly seen now than ever before. Psychopathic wards in general hospitals and psychopathic hospitals in cities with more than 100,000 population are required to meet this need, but it will be very difficult indeed to induce the Legislature to extend State care into this field. Much may be done by private philanthropy when the rich returns from such treatment are more generally known, but there seems a distinct responsibility resting upon the city governments to assume this work. New York City should take the lead by establishing a psychopathic hospital in connection with Bellevue Hospital or with one of the medical schools. The State should foster the establishment of such facilities and should exercise a certain amount of helpful supervision.

The feeling is growing in this State that a share of the burden of caring for the alien insane should be assumed by the Federal Government. The State is permitted to take no part in the mental examination of immigrants while it bears the full burden of caring for those who gain admission to the hospitals for the insane. According to a special study of this subject made in 1913 by Dr. Spencer L. Dawes, there were 9,241 aliens in the New York State hospitals. This number exceeds the total number of patients under treatment in all but a few of the most populous States. It would be true economy for this State to press vigorously its claim against the United States Government for reimbursement for at least a part of the expenditures made on account of the alien insane.

Conclusion.

These are a few activities in which true economy must be clearly differentiated from that kind which is measured by the aggregate amount appropriated by the State Legislature for the care of the insane. There is no doubt that many members of the Finance Committee of the Senate and of the Ways and Means Committee of the Assembly see, beyond the totals in the appropriation bills before them, the pathetic army of the insane whose comfort and happiness and even often whose chances of recovery lie wholly in their hands. What benefits would follow if the vision of our lawmakers could be still further enlarged so that they could see the *whole* problem of mental diseases as it is woven into nearly all phases of our civic and social life! Then it would be apparent that it is only a counterfeit economy which cuts out of the appropriation bills all provisions for extending the care of the insane into the community and for embarking in the great work of prevention which lies before us.

THE SCOPE OF SCHOOL MEDICAL INSPECTION WITH SPECIAL REFERENCE TO NEW YORK STATE UNDER A MANDATORY LAW.

Read in part before the New York State District Superintendents' Association, Meeting in Buffalo, November, 1914.

By CLINTON P. McCORD, M. D.,

President, New York State Association of Medical Inspectors and Physical Educators

At this particular time, when the possibilities of social uplift and race betterment loom large in the new field of preventive medicine—when the science, medical sociology, is being gloriously born and the public is beginning to realize the value of " keeping well " rather than " getting well," the institution of systems of school medical inspection throughout the country is one of the most gratifying " signs of the times."

An efficient system of school health supervision in any state is like a conservation commission, with its aim—better men and women for future generations. The day is here when no state or municipality can close its eyes to the great need of proper physical care of the community's future citizens during the years when these little ones are so largely within the keeping of the schools. It is no longer enough to supply buildings, books and teachers; there must also be the certainty that attendance upon this training, which law in so many states has made compulsory, shall not mean " compulsory disease."

Many states for some years have had permissive laws on school medical inspection, and in the larger cities agitation on the part of child hygienists and civic organizations frequently resulted in systems of inspection conducted voluntarily by local practitioners or maintained as definite divisions of the city health or education departments. Such systems are in operation to-day in a number of our representative cities with results that in most instances surely justify the existence of the work. Mandatory legislation in the increasing number of states enacting such laws has therefore been designed chiefly to bring to the smaller cities, villages and rural districts, a measure of the benefits of systematic school health work previously enjoyed only by the larger centers. The system in New York City under the wise administration of Dr. Josephine Baker, Director of Child Hygiene, and the Philadelphia system under Dr. Cornell have given us perhaps the best knowledge of the problems on a large scale.

On August 1, 1913, through the wise and constructive appreciation of school health problems on the part of Dr. Thomas E. Finegan, Assistant Commissioner for Elementary Education for the State of New York, a mandatory law on school medical inspection became active in this state. This law is probably the most satisfactory on the books of any state from the standpoint of educational hygiene, inasmuch as it places the administration of state-wide inspection under the powerful State Education Department, each district system being organized under the local board of education. New York City, Buffalo and Rochester, where systems have been operated for some years, alone are exempt from the provisions of the new law.

No little misunderstanding has arisen and many school men have experienced considerable unpleasantness in the initiation of inspection in their respective districts. Practically all of this has been due to the unfortunate circumstance whereby the law suffered because no bureau to attend to the administration of the details of so important a division of the work of the State Education department has at this date been possible.*

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* Since the date of writing (November 1. 1914) Dr. William A. Howe has been appointed State Medical Inspector of Schools. Dr. Howe brings to the work an extended experience in public health matters. Through his long experience as Deputy Health Commissioner of the State and his work as epidemiologist, he enjoys a wide acquaintance amongst public health workers. In addition to this, his full appreciation of the problems of health in education will mean a careful and constructive administration of this important work in the educational system of the State.

For a detailed explanation of the provisions and penalties of the law let me direct you to the bulletin of the State Education Department on Medical Inspection in the Public Schools, by Dr. Thomas E. Finegan.

What are the details that must be carried out in the practical execution of the work if the school district is to command the best service from its employees and secure to the school child the maximum of good under this admirable law? What is the proper scope and purposes of the work, here or in any state? What is the working force with which the requirements of the law should be met if the school children are to have their just dues? What equipment is necessary? How many children can be properly examined in a given time? What records should be kept? How are parents to be reached?

These are some of the questions that school executives and physicians, new to the work, most frequently ask.

I have traveled about the state a little in the past year, have talked with many people who are interested in the new law under which their children have received examination; thirty or more physicians, newly appointed medical inspectors from all parts of the state, have visited my office to talk over plans for the work; over a hunderd school executives, boards of education and physicians have written, asking questions upon some phase or detail of the work. As a result their difficulties, their various viewpoints, their desire to "do the right thing if we know how," and their inevitable mistakes in a new field, are quite familiar items. I write with the hope that out of this somewhat intimate understanding of actual needs I may be able to cover in the space of this article the subjects that seem most to require exposition.

Conformity to the letter of a law frequently brings scant returns in benefits, whereas, conformity to the *spirit* means little more expenditure but brings maximum results. Many districts may spend a certain sum to comply with the letter of the law and secure practically no results except immunity from a penalty, whereas, others spend comparatively few dollars more, complying with the spirit of the law, and reap maximum rewards. In one village a doctor told me that he had felt that he should receive fifty cents for each examination, but the board of education thought that it was worth only ten cents. "Finally," he said, "we 'split the difference' and I received twenty-five cents 'a head'; and next year Dr. S. will examine them and the following year, Dr. W." Certainly with such an arrangement no standard was possible and surely many other irregularities greatly lowered the value of the work. It is of little use to pay doctors to examine school children and report that a certain number suffer from disease and defect if the single most effective instrument in "following up" these cases and seeing that they are treated—the school nurse—is not available.

The New York State law provides for an annual examination of *all* school children and gives the parent the privilege of having the family physician make this examination in accordance with a blank prescribed by the department and called a health certificate.

During the first year that the law was in effect the response of parents in the shape of health certificates varied from about 60% in the rural districts and villages to 10% in the cities. This autumn only about half as many have availed themselves of the privilege.

The Working Unit.

The first and most essential thing to determine in a given district is the size of the working staff. The working unit in medical inspection, as recognized by the most practical school hygienists and as indicated by the State Education Department, consists of one doctor and two nurses for each three thousand children.

Any district with three thousand school children should employ its physician for "full time" with provision for a salary sufficient to make the place attractive to a good man. The city of Amsterdam, N. Y., with this number of pupils, employs a full time physician who has the assistance of a school nurse as well as a portion of the time of three additional public health nurses. The working unit in Amsterdam seems about ideal. For each additional three thousand children an additional physician should be employed for three hours each afternoon during the school year, or as many days as are necessary to complete the work of examination indicated by the chief inspector; plus the accomplishment of sanitary surveys of school conditions, consideration of health of teachers, response to calls from schools for diagnosis of contagious conditions, investigation of epidemics, etc., when the burden of such work is beyond the chief inspector. The part-time physician should be paid for the number of afternoons actually engaged in such work. Four dollars for each afternoon's work is perhaps a fair compensation. During such an afternoon a capable examiner should handle about twenty or twenty-five children, provided the examination conforms to the standard that is practicable under school conditions, and that the nurse assists by getting the children and rendering clerical assistance.

In most school buildings the only examination room available is the vacant kindergarten room in the afternoon, or the principal's office. Under such conditions the removal of the clothing is not practicable and is practiced in very few systems. Besides, a competent examiner will be able to ascertain all facts required for purposes of school medical inspection without removing any clothing except in a relatively small number of cases that may be seen on Saturdays or in the late afternoons or evenings at the office for a more detailed examination, at which the parent, or surely the nurse, should be present. This group includes the cases of anemic and poorly nourished children; those with glands that show a tendency to break down or become confluent; those with chronic cough or digestive disturbances; those that are extremely nervous; or those that suffer from dizziness, shortness of breath, etc.

An examination of the character indicated in the *health certificate* is practicable only in a physician's office and can not be properly accomplished in less time than half an hour. This is the examination that the child undergoes whose parents desire their family physician to make the examination. No space is provided upon the health certificate for a record of tests of eyes and ears, for the reason that the law directs that these tests must be made annually under the direction of the school medical inspector in the case of *all* children. The omission from the health certificate of this phase of the examination wisely avoids the disorganization that would develop from conflicting results and the loss in efficiency incident to duplications. When the family physician receives a case bearing a card from the school medical inspector that states that the child has defective vision, he can do justice to the case only in one of two ways: (1) refer the parent, on the strength of the inspector's tests, to an oculist, or, (2) subject the child to standard tests at his own hands before reference. To pursue the latter course the family physician should have office space sufficient to insure the seating of the patient *at least* twelve feet from the chart, and he should know how to use the Snellen test card *with children*, as well as the card for near vision and the astigmatic chart where there is any doubt as to whether or not the child should be seen by a physician who specializes on the eye. It is not enough to have the child read a paragraph in a newspaper and to ask his mother whether or not he can read the signs on the trolley cars.

The inspector's card usually has been sent after a visual acuity of less than 20/40, in children of most school grades, has been discovered, plus the concomitant symptoms, in many cases, of blepharitis, styes, blurring of print, squint, and frontal headaches. The majority of family physicians seem inclined to refer their little patients to an oculist on the strength of the school inspector's card.

The Inspector's Examination at the School

After health certificates of the prescribed form have been submitted by the parents of a certain number of children the school inspector faces the examination of all children who have not presented such certificates or whose parents have waived their privilege in the matter. Where no suitable room exists for these examinations, as may frequently be the case in rural communities, the children might report in relays at the office of the inspector during or outside of school hours. This is of course practicable only where the number of children is small. Theoretically and practically it is better to bring one doctor to several thousand children than to take several thousand children to one doctor. There is no grave reason why a standard examination, such as the one later outlined, should not be accomplished in a rural school room in case a more suitable room is not available.

For this examination a special record card should be printed. This card should have spaces for name, age, grade, school, date of vaccination, and for the father's nationality and occupation; and for an abbreviated or code record of the physical condition of the child under the following heads: Eyes (Right and Left)—

Symptoms of Eye Strain—Glasses Worn?—Tonsils—Nasal Obstruction—Nutrition—Teeth—Orthopedic Defects—Nervous—Skin and Glandular—Miscellaneous. There should be space for such a record for every year of the child's school life and suitable spaces for a record of when parents were notified of defects and when results were obtained in the shape of "cure," "operation," "glasses," "treatment," "dentist," etc.

This physical record card should be kept at the school along with the child's school record, where it may be consulted with advantage by his principal and teachers.

The examination indicated on such a record card is the most practicable for purposes of school medical inspection, since it may be accomplished without the removal of any clothing and in a comparatively short time—from six to ten minutes, according to the experience of the examiner, the age of the child, and whether or not there is furnished clerical assistance in the recording of the findings.

We may now consider such an examination somewhat in detail:

Eyes:

The Snellen card test should be given with the child seated twenty feet from the card wherever the room is large enough. Where the distance is less than twelve feet the findings are not reliable. The same might be said of results obtained after three o'clock with natural light on the average winter day. The card should present an absolutely flat surface, should be at the proper level with a dark background, and should be well lighted. The child must not be facing a window or lighted door. The card covering the eye that is not being tested should not touch nor press the eye. Children who do not quickly recognize the letters often respond to the chart that bears numbers, but here, too, care must be taken to avoid error, since some children with acute vision who "*know* their numbers" do not recognize them *as printed* on the chart, and therefore apparently do not respond to the test. With these children, or with the lower grades, the "illiterate chart" may be used. Even better than this, especially with kindergarten children or with children that are timid and not very responsive, I have found the McCallie cards for testing visual acuity. These cards place the test on the basis of a game and at times are a great aid. The card for near vision and the astigmatic chart may be useful in making a diagnosis more complete in some cases.

Some standard of defective vision should be adopted in accordance with which parental notification cards may be sent. This standard will vary somewhat with the age of the child, the present wearing of glasses, length of time since glasses were secured, presence of incurable conditions, etc.; but in general, a child with a visual acuity of less than 20/40 or one with an acuity of 20/40 and with symptoms of eye strain, should be seen by an oculist. Any child with a squint and not wearing glasses, of course should receive an examination at the hands of an oculist. Symptoms of eye strain should be noted, and if glasses are worn, the date when they were obtained and whether they were secured through an oculist's prescription or were purchased direct from an optician. Swollen and thickened lids should be everted and examined with the possibility of trachoma in mind. A durable Snellen test chart, printed on linen and capable of being rolled into a small space, can be purchased from McIntire, Magee & Brown Company, 723 Sansom Street, Philadelphia. This chart also includes an astigmatic chart.

Cases that have received notification cards should be " followed up " by a nurse within a couple of weeks, the needs of the case explained to the parents and action secured. Response to the notification card alone will vary from 15% to 25% among the well-to-do families, to no response among the poor and the foreign population. The " follow-up " work of the nurse raises the level of response considerably among all classes. Where investigation shows that the parents cannot afford treatment or glasses the medical inspector may furnish this help out of a fund that the school district is authorized to set aside for such purposes. This help should not be limited to the purchase of glasses after dispensaries have furnished free prescriptions, but it should be sufficient to secure medical or surgical attention for at least the most flagrant defects that may be handicapping the children along *any* physical line. This free treatment should be given only to the cases that are unable to employ their own physician. Such measures will go a long way toward arousing the better class of parents to the importance of having *their* children treated.

One well-to-do father came to me and said that his dentist had told him that his child's decayed teeth were only "first teeth" and would "rot out." When I told him that we were treating just such cases in the free dental dispensary, he said: "Well, if it is worth while with the children of the poor it is worth while for *my* child, and I shall take my little girl to a dentist who *will* treat her."

Ears:

The "watch test" is perhaps the most practical. The examiner should have standardized his watch and should so give the test that deception or childish acquiescence to a query is eliminated. There is considerable variation in the response of children at different ages, and only experience in testing numbers of pupils of various grades will bring to the examiner rapidity in arriving at correct conclusions. Discharging ears should be a matter for serious concern, and a home visit in the interests of the child should be made promptly by the nurse.

Tonsils:

Tonsils that are enlarged, ragged and cryptic, especially when there is a history of attacks of tonsilitis or frequent sore throats with absence from school, are pathologic, and are surely a menace to the health or even the life of the child. Where the child is under twelve years of age, however, the profession in general, seems about evenly divided as to the wisdom of operative procedure. The medical inspector should adopt some conservative standard to govern his parental notifications.

Nose:

The medical inspector does not diagnose adenoids. To diagnose adenoids one must use a light and mirror and *see* the adenoid mass, or must run the finger into the pharynx and *feel* it. Either of these procedures is not practicable in school work. He should determine the presence or absence of *nasal obstruction,* and if there is obstruction that appears chronic in character—that is, if it is not the obstruction due to swollen turbinates and the catarrh of a "common cold"—a card of notification should be sent. The family physician at his office may then determine the cause of the obstruction—as spurs, deflected septum, adenoids, etc., and the advisability of referring the case to a rhinologist. The high palate, irregular teeth, mouth breathing, nasal catarrh with eczema of nostrils, dull hearing and general inane facial expression may frequently make the diagnosis of adenoids a safe one, but the inspector's card should read—nasal obstruction—leaving the exact diagnosis and recommendations to the family physician or to his rhinologist.

Teeth:

It is sufficient to note the number of decayed teeth, in particular where the " six year " molars are involved; the presence of green stain, supernumerary teeth, abscesses and marked malocclusion. It is poor economy to employ a dentist to inspect the mouths of school children when we *know* that eighty to ninety per cent. need dental attention, and where a glance at the time of routine medical examination or by a nurse or teacher will locate the pupils who should have treatment. If the services of a dentist are avilable it is far better to have him devote himself to the actual treatment of the most urgent cases located by inspector or nurse. Every school district should make provision whereby free dental treatment may be given to all children whose parents are unable to pay for such relief. The statement has been made by a well known authority on school hygiene, based on a study of a considerable number of cases, that in general, it requires a child with bad teeth one-half year longer to complete his elementary course than it does a child whose teeth are in good condition. If this be true, since the yearly cost of training a child in the public schools is about $32, any city or district pays $16 every eight years or $2 a year for every child whose teeth are englected.

This is more than it would cost to provide the child with dental treatment, to say nothing of the diseases to which the child with decayed teeth is liable to fall victim. One dentist probably will handle only about six to ten children in an afternoon, and hence the work in most places will be limited to a small part of the school population. The most important cases, outside of those suffering from abscess or severe toothache, are the children with decayed " six year " molars, the most important teeth of the permanent set. The major portion of the work should therefore be with the children of the lower grades. Four dollars an afternoon is perhaps fair compensation where materials, instruments, etc., are furnished by the district.

Nutrition:

A certain number of poorly nourished, anemic children will be discovered in every school as a result of routine examination. These children should be cared for in open-window class rooms at relatively little expense. The problem of school lunches and the feeding of school children in general is a problem requiring more amplification than is possible in this paper. I urge all persons interested to secure the very clear and comprehensive presentation of this subject embraced in a paper,—The School Lunch Service, by Mr. Edward F. Brown, Superintendent of Bureau of Welfare of School Children, New York City, and Executive Secretary of the New York School Lunch Committee. Mr. Brown is a lawyer and a man with wide training and experience in the economics of social and educational work and has studied the school lunch problem from all sides.

Careful examination of all school children will reveal a small number who have open tuberculosis. Where no provision is made for the care and training of these children they must be excluded from school for the sake of the other children. This means they are frequently forced into conditions that rapidly put them in the incurable class. The school district should make provision, perhaps jointly with coterminous districts, for the care and school training of such children in a special school of the "pavilion" type, where they may received school training while they are being cured of their disease. The subject of open air school provision and the duty resting upon the school authorities in every community; the benefits that experience in so many cities has shown result from this type of school provision (improvement in physical and mental condition and greater freedom from intercurrent disease) have been adequately set forth by Dr. Thomas Finegan in his annual report for 1913.

The relation of age to height and weight is of minor importance to the examiner in estimating the nutrition of a pupil. The child is before him and he bases his judgment on something more significant than a few abstract figures which in themselves give him no mental picture of the case in question. For this reason, anthropometrical measurements of school children, while of value where intensive studies of special groups of children are to be made, are of no practical value in routine school medical examinations. Even the taking of height and weight involves many dollars of expense in scales and stadiometers, and consumes hours of the inspector's time with no definite or practical result to be achieved. So far as the inspector is concerned, his estimate of poor nutrition must be based upon the pinched, pallid features; the arrested development; the lack of animation and spontaneous activity; the weak and flabby tissues and the signs of nervous exhaustion. Certain definite types soon become fixed in the mind of the examiner who has handled any considerable number of children.

Skin and Glandular:

Under this heading may be recorded chiefly the presence of enlarged cervical lymph nodes or of thyroid swelling. The large number of pupils with enlarged glands sometimes reported by examiners undoubtedly includes the children who have one or more slightly palpable nodes due to nose, throat or teeth defect. The things of importance in these cases are the adenoids, the chronically diseased tonsils or the decayed teeth. The enlarged nodes frequently associated with poor nutrition, those that become acutely inflamed and those that undergo softening are the ones that merit prompt attention.

The presence of any of the eczemas should be noted, since the record will perhaps serve to direct attention to the faulty nutrition, improper diet or digestive disturbances with which these skin conditions are so frequently associated. Any contagious or parasitic skin disorder should also be looked for, and parents should be urged to have treatment instituted at once for any acute or chronic condition from which the child is suffering. In the case of pediculosis a card should be sent, bearing directions for simple home treatment which the school nurse may later demonstrate in case the child's head remains unclean. In flagrant cases where parents refuse to cut the child's hair or to assist in freeing it from vermin the attendance officer may secure a "summons" and take the offending parent before a magistrate. The knowledge that this will be done has the desired result in the majority of cases of wilful neglect. Adequate handling of this "parasitic plague" is possible only through the diligent watchfulness and work of the tactful but aggressive school nurse.

Orthopedic and Nervous:

Under this heading may be recorded stoop-shoulders and flat chest; lateral curvature; the chief results of paralysis, rickets and bone and joint tuberculosis. Here also may be noted the condition of "general nervousness," as manifest by trembling, tensely held body, quivering eyelids and lips, low, jerky speech, twitching of facial muscles, etc., in the irritable type; and drooping body, shuffling gait, listlessness, inattention, mental dullness, etc., in the apathetic type. Chorea, habit spasm, mental deficiency, the psychic disturbances of adolescence and the emotional instability due to early meningitis or to present epilepsy, should be kept in mind when examining children under this heading.

Miscellaneous:

Here the examiner may record speech defects; congenital defects, accidental or incurable conditions (for which no notification card is sent) and any heart or lung lesions that may be revealed in the more complete examination of the group of poorly nourished, flat chested, nervous children referred to in an earlier paragraph.

So much for the routine physical examination of the pupil. A suitable card should be sent to the parents of each child that is found defective. This card should state the defect and should direct the parents to take the child to their family physician. The card alone, as has been stated before, secures response in from 0 to 25% of the cases, depending upon the social status and enlightenment of the parents. The results may be raised to sixty, seventy or eighty per cent. with the school nurse to promptly and wisely "follow up" the proper cases, explain to the parents the danger in neglect and urge them to secure treatment. The school nurse stands as the single most effective instrument for success in the work either in urban or rural systems. It is poor economy to pay doctors to examine school children and tabulate defects if there is no agency through which correction of these defects may be secured.

It is with pleasure that we note that the Department of Nursing and Health, Teacher's College, Columbia University, under the able direction of Miss Nutting, offers in September, 1915, a definite course in school nursing, post-graduate in character, covering one academic year. Our nurses' training schools in general are slow to sense the scope of public health and social service work as applied to the public schools, and our medical colleges are tardy in the establishment of courses in child hygiene and school medical inspection. I am glad to say that in this state such courses to my knowledge are now given in the medical school of the University of Buffalo, in the University of Syracuse and in the Albany Medical College.

A school nurse should receive from $750 to $1,200 a year, and should be employed for twelve months with provision for at least one month's vacation. She must be *registered* in this state to do school nursing under the new medical inspection law. A system should insure a visit by the nurse to every school *at least* every second day. This means that one nurse will handle from four to six schools, according to the size, character of population and distance between schools. I have in mind one small city where the nurse visits the schools monthly. It is needless to say that this is school nursing in *name* only.

The Acute Contagious Diseases.

The so-called acute contagious diseases constitute only from one-half to five per cent. of the work in a system of school medical inspection. This is a very important though relatively small part of the work. The finest kind of co-operation should exist between the school medical inspector and the local health officer. Where an agreement can be reached as to uniform exclusion regulations in any given district these two officials can supplement one another's work with the result that the great majority of cases of contagious disease will be under proper surveillance and " contact " children will be handled in a manner calculated to protect the larger body of pupils, but at the same time avoid needless loss of school time.

Dr. Meader, Director of the Division of Communicable Diseases, State Department of Health, has elaborated a comprehensive bulletin which covers the question of exclusion in detail. In the city of Albany, the following bulletin (which falls within the lines of Dr. Meader's admirable outline and is really a simplified form of the same type) has been found clear, concise and practical. It might be followed to advantage by school principals or nurses, where their inspector is not available at all times, but where such a bulletin has been agreed upon by the inspector and the local health officer.

Cases of these acute diseases known to the health officer should be reported to the medical inspector, who in turn should report to the health officer all cases seen in school or known to the school officials.

EXCLUSION REGULATIONS.

DISEASE	CHILDREN WITH THE DISEASE	OTHERS FROM THE SAME FAMILY
Diphtheria	Excluded until presentation of Health Officer's certificate.	Excluded until presentation of Health Officer's certificate.
Scarlet Fever	Excluded until presentation of Health Officer's certificate.	Excluded until presentation of Health Officer's certificate.
Measles	14 days	14 days unless *certificate of immunity* from family physician. (This certificate must state that the child in question has had the disease.)
German Measles	8 days	21 days unless certificate of immunity is furnished as described above.
Chicken-pox	21 days	21 days unless certificate of immunity as described.
Whooping-cough	8 weeks	14 days unless certificate of immunity as described.
Mumps	14 days, provided swelling has subsided.	21 days unless certificate of immunity as described.
Tonsilitis	Excluded until recovery (about 1 week).	Not excluded.
Simple sore-throat	Excluded until recovery (about 3 days).	Not excluded.

One important duty of the school nurse is the frequent and routine general inspection of all the children in the schools of her district for evidence of contagious disease, mild cases of which frequently are found sitting in the classes through the most communicable stages of the disease. Where laboratory facilities are available a culture of a bad sore throat sometimes leads to prompt diagnosis of a case of diphtheria, and the routine culture of classes, where an epidemic is threatened, may locate a " carrier " and abort the epidemic, or *at least* prevent the prolonged contact of many children with a disseminator of the disease. What is a simple sore throat to-day may be diphtheria or scarlet fever to-morrow, and all children with sore throat and temperature should be excluded from school. Where there is not a " full-time " inspector on the field, and provision is simply made for the examination of children by physicians in the afternoons, the school nurse must shoulder the responsibility of handling the so-called " miscellaneous " cases that are brought to her notice at the time of her morning visits to the schools. The medical inspector, however, should be accessible to the nurse by telephone, so that she may ask his advice or have him come to the school if she encounters an unusual or puzzling case. Where a nurse is not employed, the principal and teacher must assume the duties of regular inspection of the children in their charge for evidence of contagious disease, if they are to fulfill their first and most vital duty as guardians of these little ones. The chief things that should rivet the attention and lead perhaps to exclusion from school for the time being, or to a summons for the school physician, are: flushed face with headache and general appearance of indisposition; a rash or skin eruption of any sort; vomiting attack; sore throat and watering eyes; eyes that rapidly have become inflamed; fainting spells or " fits."

Contagious Skin Conditions.

The principal contagious skin conditions from which school children suffer are: contagious impetigo, scabies, ringworm of scalp, ringworm of body and favus. Children with one of these diseases should be excluded from school until they are well under treatment for the condition. If they return before cure is effected it must be with the lesions well covered with some medicament from their doctor or a dispensary, unless the nurse attends to these cases and applies proper remedies under the direction of the inspector from the medicine cabinet that should be installed in every school. This cabinet should at least be stocked with " first aid " material. A very serviceable equipment for an emergency cabinet for a school is as follows:

A small porcelain sponge basin, orange-wood stick, medicine glass, gauze bandages (1 and 2 inch), aromatic spirits of ammonia, hydrogen peroxide, flexible collodion, borated vaseline, green soap, clinical thermometer, scissors, tweezers, roll of absorbent cotton, muslin bandage (3 inch), oil of cloves, tincture of iodine, adhesive tape, bichloride soap, alcohol (70%).

The supplies for such a cabinet need not cost over $2.50, exclusive of the clinical thermometer.

If treatment of minor skin conditions is undertaken then the proper parasiticides, sedative ointments, etc., must be added. This becomes necessary only where no family physician is employed and dispensary facilities are absent, inadequate, or are not sought by the patient.

Principal Diseases and Physical Defects of School Children.

The acute contagious diseases set down in the Exclusion Bulletin given previously; the skin conditions named above, plus the eczemas; simple impetigo and a few rare skin conditions; alopecia areata; trachoma; conjunctivitis (simple and phlyctenular); enlarged tonsils; defective vision; nasal obstruction; enlarged lymph nodes; decayed teeth; goitre; poor nutrition; tuberculosis; chronic pharyngitis; defective hearing; lateral curvature of spine; stoop-shoulders and flat chest; various congenital and incurable deformities; congenital syphilis; chorea; habit spasm; general nervousness; paralysis; epilepsy; nervous disturbances of adolescence; enuresis; general uncleanliness; mental deficiency make up the list. A few of these are only symptoms of some underlying cause, but it is usually one or more of the symptoms named that will first bring the child to the examiner's notice. With the above subjects the school physician and school nurse should be thoroughly familiar.

Another phase of the work that is very important is that which has to do with the health of officials that come in daily contact with pupils under more or less intimate conditions. This matter is covered in part in the school medical inspection law, which provides for the examination by the inspector of teachers and janitors where such examination seems specially indicated. Dr. Thomas D. Wood of Columbia University, probably the leading medico-educationalist in this country, has given the question of the health of teachers much study, and has had an exceptionally wide experience upon which to base his statements. He states that 2% of the children are being taught by teachers that are tuberculous and dangerous to the child, as well as being in a condition themselves that unfits them for productive and strenuous service.

Personally I have had some experience with epileptic teachers. The *least* that any school system can demand is that a teacher to begin her service must be in fit physical condition, as certified to by their medical inspector, representing the interests of the school district.

Furthermore, public opinion would undoubtedly uphold any set of officials in the removal of a tuberculous or an epileptic teacher from the school system.

From a much broader viewpoint will the welfare of the New York State teacher be considered by the Commission on Welfare of Teachers which was named by Dr. Brubacher, President of the State College for Teachers, as his last official act as President of the New York State Teachers' Association. This commission is unique in the field of educational hygiene and represents a broadly scientific approach to the many problems on the hygiene of teaching that confront the modern educator. Dr. Thomas D. Wood is chairman of this commission, and the contributions to education as a science that may be expected through the work of such a body are without precedent.

The Purposes of School Medical Inspection

1. To detect and exclude cases of parasitic and contagious disease, and to prevent epidemics of the same among public school children.
2. To detect physical defects and secure correction of these defects through the co-operation of school officials, school nurse, parent, and family physician or dispensary chief.
3. To pass judgment on the physical fitness of teachers and janitors.
4. To act as expert to the Board of Education in maintaining sanitary conditions and proper physical equipment in the schools.
5. To teach practical hygiene in school and home through the agency of the school nurse.
6. To diagnose mental deficiency.
7. To make special studies of the relation of the physical child to the various phases of educational activity, and, in conjunction with the superintendent of schools to correlate preventive medicine and pedagogy in order to produce a maximum of efficiency in the schools consistent with the preservation of health.
8. To co-operate with all agencies concerned in the social, moral, mental and physical improvement of the child.

The first three of the above purposes we have discussed previous to setting forth the tabulation. They are the lines of activity that occupy the largest share of attention of most medical inspectors at the start of the work. However, as has been pointed out by very able school hygienists, it seems that perhaps the most important matters to be dealt with and the ones that might well be considered first, are those conditions of physical environment that fall under the fourth point in the above outline. The question of proper school sites, buildings, furniture, seating, lighting, heating, ventilation, air-space, drinking water, cleaning, toilet, rest-room and playground facilities, suggests a wide field for careful sanitary surveys, standardizations and definite reports that have the virtue of bringing to the school administrator's eye scientific facts upon which recommendations for improvements can be made with more or less unassailable authority. The new medical inspection law takes cognizance of this important phase of the work of an inspector. Medical inspectors should familiarize themselves with the above lines of school hygiene. In this connection your attention is directed to the pamphlet on Minimum Sanitary Requirements for Rural Schools, prepared by Dr. Wood, as well as detailed works on school hygiene that deal with these problems as they exist in the large schools of our cities.

The fifth point is indicated in the new law in the recognition of the importance of the nurse in any system of medical inspection. If anyone is disappointed over the results secured from school health work, he doubtless comes from a district that has employed no nurse, or from a city where the force of nurses is pitiably inadequate. As has been reported by the Committee on Rural Health Problems of the National Educational Association, country school children are found, from the committee's extensive survey, to have more physical defects and to suffer more from the ailments peculiar to children of school age, than do children of our crowded cities. Under the new medical inspection law in New York State the opportunities for constructive school health work in the rural districts are rich for the nurse. She has in this field pioneer work, and her day as a force in modern education is just dawning. The next few years will see larger avenues of service opened for her eager progress. Wise is the school man that is really alive to the meaning of this great movement for " health in education."

Dr. Thomas E. Finegan has even enlarged, in several educational addresses, upon the need of attention to many of these questions in the normal schools and city training schools of the state. Model open air classes, classes for mentally deficient children, and health exhibits, should there be maintained; and short courses should deal with the health of the school child, medical inspection and personal hygiene.

The sixth purpose—the diagnosis of mental deficiency—is a very important function of an efficient system of school medical inspection. Expert examination of school children shows that about 2% are of such mental constitution that they can never profit by the work of the regular grades. These children, scattered through the regular classes, are either neglected or punished instead of being studied. They bring to us most of the problem of truancy and incorrigibility, and are a tremendous drain upon the energies of the regular grade teacher. This type of child can never be made like other children and he therefore requires special care and treatment under conditions suited to his abilities. A somewhat larger group of pupils would be classed as "backward" and would profit greatly by having special class opportunities. Not only are the regular classes thus relieved from the bad example and drag exerted by these backward children, but, by the school's acceptance of its duty, many of these children will be made happy and useful to the extent of their powers. The state of New Jersey by law requires that special classes be established in every district where there are at least ten backward children. The educational authorities of many cities are alive to the great need of the proper segregation and training of these cases, not only for their own welfare, but for that of the normal pupils and of society at large. The training of such children is a specialty in education, based upon a special psychology plus expert classification and study from a medico-psychological standpoint. There is an opportunity in such work for a teacher to broaden her knowledge of child nature and to live close to one of the most vital movements in modern education. The city training schools, normal schools, and medical colleges should furnish training to their students in the recognition of these children. The next five years will doubtless see "clearing houses" for these mentally deficient children as well as laboratories for the examination of all juvenile delinquents, established in many of our cities; and field workers from these centres, let us hope, may co-operate with school authorities in attacking the problem in the rural districts. In the meantime, it is not likely we shall find the great educational department of the Empire State tardy in shaping suitable legislation to cover the need for proper segregation and training of these unfortunate children, numbering thousands, that clog the wheels of our school machinery.

This problem and the seventh and eighth purposes, as set down, fall more exactly under the broader policy of educational hygiene of which medical inspection is only one of the chief phases. Under the seventh heading especially are suggested items such as modifications of curriculum to fit certain physical and mental types of children; hours of study and recitation in relation to periods for relaxation, play and manual work; adaptation of teacher to pupil and of pupil to physical environment; fatigue, etc. Little has been done along these lines anywhere, and it is not to be supposed that a system of medical inspection will routinely concern itself with these problems at the start. Workers in this specialty, however, who are planning to make it a considerable part of their life work, should realize that as the scope of the work broadens it will expand naturally into the wider subject of educational hygiene. Under this heading we are even now considering the child in a more scientific manner.

PROPER SCOPE AND PROCEDURE IN CONSIDERING THE CHILD.

1. Hygienic and medical.
2. Sociological.
3. Psychological.
4. Pedagogical.

For years we strove to *teach* the child with little knowledge of him from the first three lines of investigation.

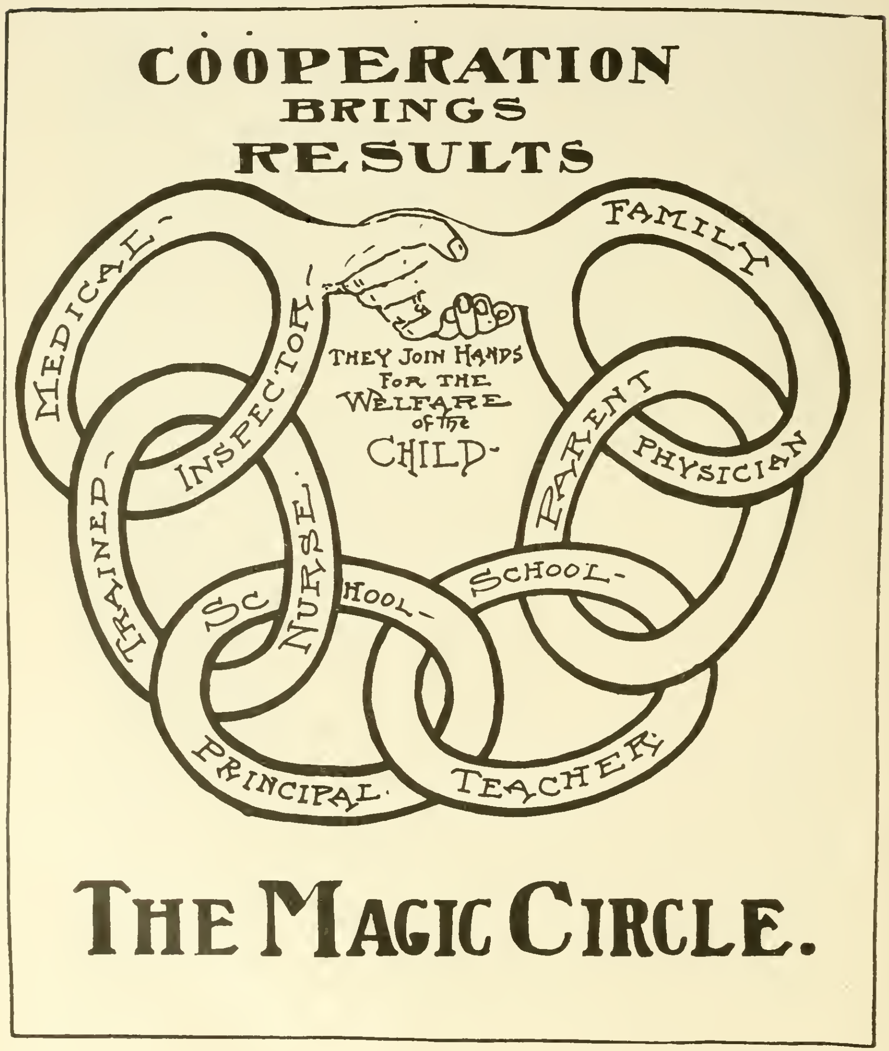
This was like treating a sick man without having a knowledge of the disease from which he was suffering or the nature of the remedies employed.

What we would *condemn* in the physician we cannot *approve* in the educator.

Last November at a conference on tuberculosis held in Syracuse by the State Health Department and the State Charities Aid Association, Sherman C. Kingsley of Chicago, Director of the Elizabeth McCormick Memorial Fund, pointed out that the business man employs high-class experts and establishes expensively equipped laboratories in order to be certain that the raw material that enters the factory is treated properly in the manufacturing process; and that the public was overlooking a great opportunity for benefiting the future of the race in not examining, classifying and properly treating the raw material that annually presents itself at the doors of our public schools. He further pointed out, that, if the school pupil fails through sickness to be a productive, self-sustaining citizen, we will, as a public, pay the money to support him in almshouses and to support his family in orphan asylums.

Physical Training.

We must bring back a little of the old Greek idea of physical training as a definite part of education. These are duties that rest upon the school authorities, rural and urban. There must be physical training under skilled supervision; otherwise more harm than good may be done. Medical examination of school children shows about 15% with deformities of the spine that are capable of being corrected by properly supervised exercises. This work is special work. A teacher may be a good athlete and yet know nothing of corrective gymnastics. This knowledge along with an understanding of scientific methods of training children in games, drills and graded exercises, can be secured only through special training along this channel of educational work. The proper control of sports and gymnasium work is secured only through the guidance of a person trained in the specialty of physical education. A man may be a fine athlete and know but little of the science of physical training, just as a man may be in excellent health and yet be ignorant of the laws of hygiene and be unfit to advise others upon health matters. All school systems should make provision for a supervisor of physical training. A district that fails to make such provision is guilty of neglecting one of the greatest forces in the training of the mind and in the preservation of the health of the children within its keeping. This work, the country over, is now so well recognized as a regular part of school life in progressive centres, that its absence should be a subject for as severe comment as would be the withdrawal of music, history, drawing, or vocational training from the curriculum. The most helpful spirit of co-operation must exist between medical inspector and physical educator. Their fields of work merge, and the activities of one supplement those of the other in a remarkable manner. The spirit of co-operation in the work of medical inspection is concretely indicated in the accompanying illustration.



Albany-N.Y.

In the broader field of educational hygiene the physical educator would properly form a vital link in such a circle.

Many physicians, new to the work of medical inspection, have said to me: "I feel that if I am going to do this work I want to do it properly; I don't want to do unnecessary or useless things. I want to get results."

In reply to these statements I believe the best direction is:

1. Read a few good, practical books on the subject. Health and Medical Inspection of School Children, by Dr. Cornell (F. A. Davis and Company); Medical Inspection of Schools, by Drs. Gulick and Ayers (Survey Associates); The Hygiene of School Life by Dr. Ralph Crowley (Methuen and Company, London); School Health Administration, by Dr. L. W. Rapeer; The Hygiene of the School Child, by Terman; Civics and Health, by William H. Allen (Ginn and Company); Health in Education, by McKenzie, are sufficient to present a fair idea of the scope and purposes of the work and the recognized methods of administration. Medical inspection, however, cannot be learned wholly from books.

2. Visit some city where a system of inspection of recognized efficiency is in operation. Observe the actual routine administration, and ask questions.

3. Keep in touch with some experienced examiner of school children for some months at least, until the details of your particular system have been worked out to your satisfaction, and you have come to an understanding of the scope and possibilities of your work and have had an opportunity to test your work by the only real criterion—*results*.

4. Be familiar with the latest advances along the various lines of educational hygiene.

5. Keep an open mind; remember there is work enough and glory enough for everyone. Forget not the magic word—*co-operation*.

The spirit of helpful understanding must be abroad. It must stir every individual educator, teacher, physician, dispensary chief, social worker, medical inspector, nurse, dentist and physical educator; it must especially animate the heart of every member of the New York State Association of Medical Inspectors and Physical Educators, which organization holds so great an impulse for the furthering of the movement for health in education. The interest of thousands of public-spirited parents will mean rich returns in the form of healthy, vigorous, efficient citizens in the years to come. If the medical profession as a whole and parents at large awoke to the wisdom of health supervision *prior* to school age, the co-operation which they then would measure to the school and child hygienist would more than double the results of present methods, raising the health standard among school children and fulfilling one of the vital objects of school training—to bring the child to maturity with his powers so developed and his energies so conserved that the richest returns may accrue to the State in its vigorous, aggressive, progressive, men and women. We also must not overlook the generous sympathy of many that are enlisted in the various welfare organizations or are interested as individuals in the health and happiness of children. We must point always to the truth, that medical inspection is not a necessary evil but an indispensable benefit.

Lord Beaconsfield said: "The public health is the foundation on which reposes the happiness of the people and the power of the country." There is no larger stone in such a foundation than the health of the twenty million school children in this country. With city and rural executives aroused to the value of health supervision of these future men and women we have the way paved for special public work of a high civic and cultural order.

Editorial

> He had fallen in an epileptic fit.
>
> As is well known, these fits occur instantaneously. The face, especially the eyes, becomes terribly disfigured, convulsions seize the limbs, a terrible cry breaks from the sufferer, a wail from which everything human seems to be blotted out, so that it is impossible to believe that the man who has just fallen is the same who emitted the dreadful cry. It seems as though some other being, inside the stricken one, had cried. Many people have borne witness to this impression; and many cannot behold an epileptic fit without a feeling of mysterious terror and dread.
>
> *The Idiot.* FEDOR DOSTOIEFFSKY.

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Dr. Hun's Second Edition.

The Second Edition of Dr. Hun's Atlas* follows closely upon the first, two thousand copies having been distributed in two years. This speaks well for the immediate acceptance of the work, but prediction of a much larger demand may safely be made, when its unique and eminently practical usefulness are more widely understood. There is no publication in the field of clinical medicine in which so extensive classification of symptoms is attempted upon an exclusively analytic plan. Dr. Hun believes that the groupings of nervous diseases may be arranged in a system which suggests the marvelous combination of organic chemistry, more readily than those of other affections, but it remains to be seen whether some other department of medicine may not yield to the magic of a master hand in just the same way that these apparently complicated manifestations have been reduced to simplicity by him. The plan of the "Atlas" is the elimination of group after group of diseases, as the diagnostic tests point in one direction or another, until finally one definite disease stands revealed. It is the method of teachers of neurology, but has not before been crystallized in tabular form.

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* *An Atlas of the Differential Diagnosis of the Diseases of the Nervous System. Analytical and Semeiological Neurological Charts.* By HENRY HUN, M. D., formerly Professor of the Diseases of the Nervous System in the Albany Medical College; Member of the American Medical Association, the Association of American Physicians, the American Neurological Association, etc. Author of "A Guide for American Medical Students in Europe," "Syllabus of a Course of Lectures on the Diseases of the Nervous System," etc. Second Revised and Enlarged Edition. The Southworth Company, Publishers, Troy, New York, 1914.

The use of the book for diagnostic purposes is explained in a careful introduction to the charts. A complete examination of the patient having been made, the diagnostician notes the important symptoms, selecting any one of prominence. This is found on the left margin of the needed chart, and on the right margin are all the diseases in which the symptom may occur. From left to right, all the possibilities are stated, and by selection of the combinations of symptoms, one disease after another is discarded until the correct diagnosis is reached. Illustrative examples are given, one of which may be reproduced:

CASE I. Male, aet. 51.—He smoked and chewed tobacco and drank to excess for years. About two months ago he began to have pains at various points in both legs. His legs became slowly weaker and his flesh became tender, but he is able to walk a mile. Organic reflexes normal. Feet cold, and the legs have lately grown smaller. On physical examination the muscles of the lower legs, and less so those of the thighs are weak, tender and somewhat atrophied. The legs, and especially the feet show slight anesthesia, marked analgesia and well marked retardation of the conduction of pain. Achilles reflex absent. A slight knee-jerk can be obtained with difficulty. In walking toes drop a little and the knees are raised abnormally high.

Important symptoms: PARALYSIS (weakness), HIGH-STEPPING GAIT, ANESTHESIA, and PAIN.

The chief symptom in this case is weakness, and we, therefore, turn to chart X, which discusses "diseases causing motor paralysis." The paresis in this case is continuous and the reflex acts are diminished or absent. We, therefore, have to do with a flaccid paralysis and turn to chart Xa. The presence of muscular atrophy following the paralysis, together with the absence of any apparent hypertrophy, guides us in the second column away from the functional diseases and the muscular dystrophies and to the degenerative atrophies; while the normal organic reflexes guide us in the third column away from the spinal cord, and to the peripheral nerve, diseases. The presence of anesthesia, pains, muscle tenderness and other sensory symptoms guide us in the fourth column to the class of neuritis of the spinal nerves. In the fifth column the fact that there are many spinal nerves affected guides us to the diagnosis: Multiple Neuritis, which the history of alcoholic abuse confirms.

We can approach this case in another way by considering his abnormal walk. In the table of contents we find that disorders of gait are treated in chart XIII and indeed in chart XIIIc. The walk in this case is evidently "paralytic and flaccid," the tendon reflexes being diminished. Furthermore it is a high-stepping gait. A comparison of the three possible abstracts with the symptoms of our case makes it evident that the case is one of Multiple Neuritis.

We can trace the case also by means of the anesthesia and analgesia: symptoms which are discussed in chart XIVa. The tendon reflexes being diminished and the organic reflexes normal in this case, we are led to three abstracts, only one of which fits our case, and thus the diagnosis of Multiple Neuritis is again confirmed. Finally we may take up, the initial symptom in the case: pain in the legs. Pain is discussed in chart XV and pain in the extremities in chart XVc. In our case the pain is bilateral and is associated with anesthesia; so that we are again brought to three abstracts, of which the one of Multiple Neuritis most nearly fits our case.

There are few changes in the book beyond the correction and elaboration of details and the addition of explanatory plates. One important and highly interesting improvement has been made in the "Introduction to the Semeiological Charts." This has become, by a process of natural evolution of reasoning, a treatise on the structure and function of the nervous system, and is a revelation of originality and logical deduction. Dr. Hun sees in man, as represented by the operations of the nervous system, a transmutation of energy, so that the activities of the human being are merely one form of expression of the universal force. This is demonstrated by the mechanics of the origin and transmission of those sensory impulses, which become the simplest manifestation of consciousness. The lodgement of perceptions in the cerebral cortex results in memory, and consciousness thus "consists, at any instant of time, of the then present perceptions and of those past memories which are directly or indirectly associated with these present perceptions and which have been awakened by them into activity. Consciousness is thus a form of energy resulting from activity of the cerebral cortex. The other memories, not at that instant active, constitute sub-consciousness and may at any time become conscious memories. The content of consciousness embraces only a small fraction of these activities which take place in the brain and indeed only a fraction of those activities which take place in the cerebral cortex. The activity within the cerebral cortex must reach a certain intensity in order to produce sufficient energy to constitute consciousness. When this cortical activity, although existent, is less intense, we call the result of this activity sub-consciousness. Such sub-conscious activity may leave an ill-defined memory as the result of its action. The conscious and sub-conscious content of the brain together constitute a *personality*."

From these grounds, which appear uncontrovertible, Dr. Hun derives the following striking definition of consciousness:

"*Consciousness is a form of energy or force, such as are light and electricity, which is transmuted from chemical action taking place in the cerebral cortex. Consciousness embraces all these chemical activities which have a certain intensity; below this degree of intensity these activities constitute subconsciousness. The process is somewhat analogous to that in an electric light bulb through which an electric current may be constantly flowing, but which only gives forth light when the current has reached a certain intensity.*"

Thus the author argues for the identity of psychology with the physiology of the cerebral cortex. The monumental work upon the charts seems to have inspired a train of logical thought and reasoning by which the world profits. The "Atlas" becomes not only a diagnostic **vade-mecum,** but a mile-stone in the progress of physiological psychology, which must have recognition in any further study of this science.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, FEBRUARY, 1915.

COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

Deaths.

Consumption	25
Typhoid fever	1
Scarlet fever	0
Measles	0
Whooping cough	1
Diphtheria and croup	1

Grippe	3
Diarrheal diseases	6
Pneumonia	12
Broncho-pneumonia	7
Bright's disease	8
Apoplexy	12
Cancer	17
Accidents and violence	5
Deaths under one year	24
Deaths over 70 years	39
Total deaths	175
Death rate	20.74
Death rate less non-residents	17.77

Deaths in Institutions.

	Resident	Non-Resident
Albany Hospital	10	12
County House	2	3
Homeopathic Hospital	1	4
Hospital for Incurables	1	0
House of Good Shepherd	1	1
Little Sisters of the Poor	0	2
Public Places	0	1
St. Margaret's House	3	1
St. Peter's Hospital	2	8
Maternity Hospital	1	4
Albany Hospital Camp	4	9
Totals	25	45
Births	152	
Still births	4	

TUBERCULOSIS.

Bender Laboratory Report on Tuberculosis.

Positive	9
Negative	40
Total	49

Living cases on record February 1, 1915		388
Cases reported:		
By card	25	
Dead cases by certificate	4	
		29
Total		417

Dead cases previously reported	21	
Dead cases not previously reported	4	
Removed	6	
		31
Living cases on record March 1, 1915		386
Total tuberculosis death certificates filed during February		25
Non-resident deaths:		
C. F. L. Pavilion	2	
Albany Hospital Camp	2	
		4
Resident tuberculosis deaths		21

Report of Visiting Tuberculosis Nurse.

Old cases	7
New cases	25
Returned from hospitals	8
Total	40
Disposition of old and new cases:	
Died	9
Sent to hospitals	20
To general tuberculosis nurse	5
Lost track of	0
Left town	1
Remaining under treatment	5
Total	40
Visits made	42
Visits made, old cases	150
Calls at Board of Health office	26

Bureau of Contagious Disease.

Cases Reported.

Typhoid fever	15
Scarlet fever	28
Diphtheria and croup	12
Chickenpox	30
Measles	6
Whooping-cough	17
Mumps	2
Tuberculosis	33
Total	143

Communicable Disease in Relation to Schools.

	Reported D.	S.F.	M.
Public School No. 1	..	1	..
Public School No. 4	..	1	..
Public School No. 6	..	1	..
Public School No. 7	..	1	..
Public School No. 8	..	1	..
Public School No. 10	1	1	..
Public School No. 12	..	..	..
Public School No. 13	..	1	1
Public School No. 14	1	2	..
Public School No. 15	1	..	..
Public School No. 16	..	2	..
Public School No. 18	..	1	..
High School	..	3	..
St. Joseph's Academy	..	3	..
St. Patrick's Institute	..	1	..
Cathedral School	..	1	..

Number of days quarantine for diphtheria:
Longest...... 23 Shortest...... 9 Average...... 12
Number of days quarantine for scarlet fever:
Longest...... 49 Shortest...... 30 Average...... 35 5/18
Fumigations:
Houses.................. 50 Rooms...................... 375

Cases of diphtheria reported	12
Cases of diphtheria, antitoxin used	12
Cases of diphtheria, antitoxin not used	0
Death after use of antitoxin	1

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria.

Initial positive	12
Initial negative	234
Release positive	5
Release negative	27
Suspicious	4
No growth	2
Total	284

Test of Sputum for Tuberculosis.

Positive	9
Negative	40
Unsatisfactory	1
Total	50

Widal Tests.

Positive	13
Negative	18
Unsatisfactory	1
Suspicious	2
Total	34

Milk examinations	11
Water examinations	1
Wassermann tests	1

BUREAU OF MARKETS AND MILK.

Public market inspections	18
Market inspections	149
Fish market inspections	8
Rendering house inspections	4
Packing house inspections	1
Slaughter house inspections	4
Hide house inspections	4
Milk depots inspected	14
Milk depots deficient	2
Milk houses inspected	16
Dairies inspected	5
Milk cans inspected	128
Milk cans unclean	8
Cows examined	356
Cows re-examined	188
Complaints	6
Lactometer tests	27
Temperature tests	27
Fat tests	34
Fat tests below standard	5
Sediment tests	18
Bacterial counts	12
Chemical tests	7
Beef condemned, pounds	300

MISCELLANEOUS.

Work certificates issued to children	9
Number of complaints of nuisances	34
Privy vaults	0
Closets	2
Plumbing	12
Other miscellaneous complaints	20
Number of dead animals removed	413
Cases assigned to health physicians	87
Calls made	180

Medical News

Edited by Arthur J. Bedell, M. D.

ALBANY GUILD FOR THE CARE OF THE SICK.—DEPARTMENT OF VISITING NURSING.—STATISTICS FOR FEBRUARY, 1915.—Number of new cases, 212; classified as follows: Dispensary patients receiving home care, 18; district cases reported by health physicians, 11; charity cases reported by other physicians, 59; moderate income patients, 85; metropolitan patients, 39; old cases still under treatment, 703; total number of cases under nursing care during month, 915. Classification of diseases for the new cases: Medical, 50; surgical, 11; gynecological, 3; obstetrical under professional care, mothers 50, infants 50; eye and ear, 1; skin, 1; throat and nose, 2; dental, 0; infectious diseases in the medical list, 44. Disposition: Removed to hospitals, 21; deaths, 19; discharged cured, 125; improved, 212; unimproved, 6; number of patients still remaining under care, 532.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 2; students in attendance, 4; nurses in attendance, 5; patients carried over from last month, 4; new patients during month, 7; patients discharged, 6; visits by head obstetrician, 1; by attending obstetrician, 1; by students, 60; by nurses, 85; total number of visits for this department, 147.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 1,494; for professional supervision of convalescents, 456; total number of visits, 1,950; visits to pay cases, 883; to charity cases, 611; unrecorded visits, 456; cases reported to the Guild by 3 health physicians, and 51 other physicians; graduate nurses 9, certified nurses 2, pupil nurses 7 on duty.

Dispensary Report.—Number of clinics held, 91; new patients, 184; old patients, 470; total number of patients treated during month, 654. Classification of clinics held: Surgical, 13; nose and throat, 6; eye and ear, 18; skin and genito-urinary, 5; medical, 10; lung, 10; dental, 0; nervous, 5; stomach, 4; children, 12; gynecological, 8.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY.—The regular monthly meeting of the Medical Society of the County of Albany was held at the Elks Club, Thursday evening, March 18, 1915, at 8.30 P. M.

The following program was presented: "The Value of a Study of the Reflexes in the Diagnosis of Disease, with Special Reference to the Loss of the Umbilical Reflex as a Diagnostic Sign in Typhoid Fever," Dr. H. C. Gordinier, Troy, N. Y.; "The Definition of Insanity," Dr. C. Stover, Amsterdam, N. Y.; "Acromegaly with Presentation of a Case," Dr. J. L. Bendell, Albany, N. Y.

MEDICAL SOCIETY OF THE COUNTY OF SCHENECTADY.—The regular meeting of the Medical Society of the County of Schenectady was held in the rooms of the Society in the New County Building on Tuesday evening, March 9, 1915, at 8.30 P. M.

Scientific program: "The Wassermann Reaction," Dr. W. B. Stone; discussion led by Dr. E. Kellert of Albany and Dr. David Wilson of Amsterdam; "A Review of the Recent Literature on Syphilis," Dr. J. B. Garlick; discussion and report of cases led by Dr. J. H. Collins and Dr. D. R. Kathan.

Alumni Association, Albany Medical College.—The annual meeting of the Alumni Association of the College will be held on Tuesday, May 25th, at the College. All alumni are urged to be present and to take an active part in the proceedings.

American Medical Association.—The annual meeting of the American Medical Association will be held in San Francisco, June 21 to 25. As usual, the program is to be extensive and many papers of great interest are to be presented.

The Harrison Anti-Narcotic Law.—On March 1, 1915, a new law has gone into effect which makes it obligatory of all physicians that they register with the collector of internal revenue and pay a special tax of one dollar to dispense opium or its derivatives, coca leaves or its derivatives. The physician must also prepare and keep on file an inventory of all such drugs in his possession on March 1st. "No special form of inventory is here required, but the inventory made must fully and clearly set forth the quantity of each kind of such drugs, preparations or remedies so held, and must be verified by oath not later than the 5th day of March, 1915." Any unfortunate doctor who fails to comply with all the provisions of this law will be liable to a fine of not over $2,000 or imprisonment not more than five years, or both, at the discretion of the court.

Physicians Arrested for Selling Morphine.—A doctor in Washington whose two years' jail sentence was commuted to a fine by President Wilson last July after the Court of Appeals sustained his conviction for sending through the mails an offer to perform an illegal operation, was arrested again recently charged with violation of the pharmacy law in selling morphine. The man is a son of a senator of prominence in his party.

Overcrowding of the State Hospitals.—The annual report of the New York State Charities Aid Association calls attention to the fact that the State hospitals for the insane are so overcrowded that the health and chances of recovery of the patients are endangered and makes a plea for the immediate construction of three additional hospitals. The fourteen hospitals in the State now hold 33,358 patients, although they were built to hold only 27,463. The total overcrowding is 5,895, an average of 21.4 per cent., and the Manhattan Hospital on Ward's Island has 1,408 more inmates than it should have, an excess of 39 per cent.

The New York State Hospital Commission.—The New York State Hospital Commission has asked for larger appropriations this year so that some much needed buildings can be constructed. For the last fifteen years an average of $800,000 a year has been appropriated for construction work, but last year it got nothing and has been forced to cut $200,000 out of the maintenance of the institutions. There are more than 35,000 insane persons in the State institutions which are fitted to house only 30,000.

The British Medical Association.—The British Medical Association will hold no scientific meeting this year, although the statutory annual general meeting and the meeting of the Representative Body will be held as usual. The meeting was to have been held in Cambridge and it is hoped that events will permit the invitation to meet in that place to be repeated in 1916.

A New Anti-Quack Bill.—Senator George H. Whitney, at the instance of the State Department of Education, has introduced a bill into the Legislature aimed at quack medicines and the physicians who lend their names and influence to the sale of such remedies. The bill defines as "unprofessional conduct" the advertising of services or remedies in any manner previously challenged by the State Board of Medical Examiners and disapproved by vote of the Board of Regents. The bill also regulates the issuance of licenses for the regents. Violation is made subject to criminal prosecution.

Patent Medicine Destroyed.—More than 4,000 bottles of "Father John's medicine," seized by the government of Philadelphia in 1912 on a charge that they were misbranded and misled the public, were condemned and ordered destroyed, February 18, under a decree filed in the United States District Court.

Superintendent of Sanitary Supervision.—Dr. Fred M. Meader, Syracuse, former city bacteriologist, has been appointed superintendent of sanitary supervisors of the State and will make regular visits to the various sanitary districts.

Medical Society of the State of Pennsylvania.—A concerted effort is made through the above organization to have a special cancer number of all medical journals throughout the country to be published the first of July. It is hoped that by such co-operation the public will become familiar with cancer, that early diagnosis will be made and that many more will be saved.

Period of Quarantine in Cases of Scarlet Fever.—In accordance with the effort now being made to bring the public health regulations and laws in this city into conformity with those of the State Department of Health, the quarantine period in cases of scarlet fever occurring in New York

City has been fixed at "thirty days and until discharges have ceased and the disinfection of the person has been carried out" instead of the thirty-five day period of quarantine previously enforced.

Christian Science Bill Defeated.—The Thorn Bill, permitting Christian Scientists to practice healing in this State, was practically killed March 3, when it was recommitted in the Assembly for a hearing by a vote of 69 to 31.

Advise Closer Watch on Cattle.—The special commission composed of Seth Low, Calvin J. Huson and Dr. Linsey R. Williams, Deputy Commissioner of Health of the State of New York, appointed to investigate conditions among cattle, has submitted its report to Governor Whitman in which it urges closer inspection of cattle, a general and frequent investigation of slaughter houses and the pasteurization of skimmed milk. The report holds that as many tuberculous cattle are slaughtered annually and made into sausage, which is liable to be eaten without cooking, farmers should be indemnified for cattle slaughtered by the State.

State Charities Aid Association.—A three days' State Conference and exhibit on Mental Hygiene of the State Charities Aid Association was held at the Education Building, Albany, March 23d, 24th and 25th. Many prominent speakers read papers and led in the discussions. The subjects discussed were: Public Health, Public Institutions, the Relief of the Poor, Children, Delinquency.

Legislature Passes Vaccination Bill.—The Senate has passed the Jones-Tallett bill designed to make the vaccination of public school children compulsory, except in cities of the first and second class. only when there is an epidemic. The bill originally affected the entire State but was amended. The measure has passed the Assembly and now goes to the Governor.

"Save 10,000 Lives a Year."—That the State can save 10,000 lives annually and reduce the death rate as low as, if not lower than, that in New York City, is the keynote of the letter from Dr. Hermann M. Biggs, State Commissioner of Health, to Governor Whitman transmitting the 35th Annual Report of the Department.

"The State Department has set for itself the task of saving 25,000 lives within five years," says Dr. Biggs. "The question now is simply whether the Legislature will provide the funds necessary to secure this saving. The amount required annually is not more than two or three per cent. of the sum which will inevitably be lost to the State unless the experience of the past is definitely changed."

Dr. Biggs says that to save these lives requires simple measures in the main. They are difficult in their application to large masses of the population only because they involve public health education.

"The education of the public to the risks of neglect, and to the advantages and ways of healthful living, is necessarily a slow process," he says. "For its successful accomplishment by the sanitary authorities, its requisites are adequate funds, broad powers, and an efficient organization carrying guidance and inspiration into every school, workshop, store and factory, as well as into every home, whether in the city, town, or remotest countryside. The exact achievements of modern preventive medicine, and the collection of statistics of disease and death have made it possible to-day, as it has never been before, to calculate with reasonable accuracy and in terms of life and health, as well as in dollars and cents, the returns which expenditures of money and of personal service by the State may secure."

The Health Commissioner quotes the motto of the State Department, "Public Health is Purchasable. Within Natural Limitations Any Community Can Determine Its Own Death Rate."

"This is as true when applied to the State as a whole as to any individual community within it," says Dr. Biggs, and he points out that not only can 10,000 lives be saved annually, but that this means that 100,000 cases of serious illness can be prevented, with all the economic loss involved in payment of physicians and nurses, the cost of medicines and special foods and supplies, the suspension of wages and decreased efficiency, lowered vitality and mental and physical suffering.

As to the money saving involved, Commissioner Biggs says that $2,500 is a conservative estimate of the value of each life thus unnecessarily lost, and $50 is a conservative estimate of the emergency expense for each case of severe illness. This makes "a total loss in this State of $30,000,000 a year in preventable disease," says Dr. Biggs, "and this estimate takes no account of the vast increase in the economic efficiency of the people of the State, which is possible through the fostering of greater healthfulness in all communities."

As evidence that this can be accomplished, Dr. Biggs points out the results of efficient health work in New York City.

"What practical man of business twenty-five years ago would have believed that 50,000 lives a year could be saved in New York City by health measures? Yet this result has already been accomplished. The financial authorities of New York City were sufficiently broad minded and farseeing to trust to the judgment of experts, and with the aid of numerous voluntary agencies the result has been achieved."

The Commissioner points out that this saving of life can be brought about not merely in the early periods of life but in the period beginning at forty-five.

"The diseases of the heart and blood vessels, the kidneys and the brain," he says, "which are peculiar to the middle and later periods of life and which would seem to have been rapidly increasing in recent years, are most insidious in their onset and development. The affected individual is often quite unconscious of their presence until measures intended for their arrest are no longer promising. A broad field of the greatest usefulness is here open to the sanitary authorities, which has thus far been almost untouched.

"We are convinced that at least five years may be added to the average lifetime of each individual reaching the age of forty-five (the period of greatest usefulness and productiveness) by the subsequent proper guidance and protection of his life activities, at no cost of efficiency, but on the contrary, with a distinct average increase."

Increased appropriations have been asked for to carry forward the Department's campaign of education, to extend laboratory facilities for diagnosis and treatment of diseases; to safeguard people against preventable diseases and to postpone the approach of those diseases which are unavoidable. The Commissioner points out that in subsequent years further increases will be needed but "this will be necessary only as results are obtained which justify them."

In closing his letter to the Governor, Dr. Biggs says that it remains for the Legislature and the chief executive to decide how far the citizens of the State can be given the benefits in prolonged and effective life, which science and experience afford. Without the effective aid of the Health Department, Dr. Biggs points out, the alternative is taking their unequal chances with disease and death.

United States Civil Service Examination.—The United States Civil Service Commission announces an open competitive examination for mine surgeon, for men only. From the register of eligibles resulting from this examination certification will be made to fill a vacancy in this position in the Bureau of Mines, Pittsburgh, Pa., at a salary ranging from $2,400 to $2,700 a year, and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

The duties of the person appointed to fill the position of mine surgeon will be to travel with the Bureau of Mines' rescue cars and make a physical examination of all applicants for first-aid and mine-rescue training; to assist the Bureau of Mines' first-aid miners in improving the technique of first-aid methods pertinent to mining and metallurgical accidents; to enter mines after fires and explosions for the purpose of taking blood samples and making other physical examinations of the victims before their removal; to make physical examinations of those engaged in mining and metallurgical industries to determine the effect, if any, of such occupations on the health and physical well-being of those employed therein; to examine the sanitary and hygienic conditions in and about mines and mining villages with a view of determining the effect of such conditions on the health and physical well-being of those engaged therein.

Competitors will not be assembled for examination, but will be rated on the following subjects, which will have the relative weights indicated:

Subjects.	Weights.
1. Education	30
2. Experience	50
3. Publications or thesis	20
Total	100

Graduation from a medical school of recognized standing, and at least two years' medical and surgical experience with industrial workers, are prerequisites for consideration for this position.

Under the second subject additional credit will be given for hospital experience, medical and surgical experience with mining and metallurgical workers, and for experience in laboratory and field investigations of industrial and occupational diseases.

Under the third subject a thesis may be submitted in lieu of or in addition to publications. If such a thesis is submitted it must deal with some phase of the subjects of medicine, surgery, or sanitation.

Statements as to education and experience are accepted subject to verification.

Applicants must not have reached their forty-fifth birthday on the date of the examination.

This examination is open to all men who are citizens of the United States and who meet the requirements.

Persons who meet the requirements and desire this examination should at once apply for Forms 304 and 2095, stating the title of the examination for which the forms are desired, to the United States Civil Service Commission, Washington, D. C.; the Secretary of the United States Civil Service Board, Post Office, Boston, Mass., Philadelphia, Pa., Atlanta, Ga., Cincinnati, Ohio, Chicago, Ill., St. Paul, Minn., Seattle, Wash., San Francisco, Cal.; Customhouse, New York, N. Y., New Orleans, La., Honolulu, Hawaii; Old Customhouse, St. Louis, Mo.; or to the Chairman of the Porto Rican Civil Service Commission, San Juan, P. R. No application will be accepted unless properly executed, excluding the medical certificate, and filed with the Commission at Washington, with the material required, prior to the hour of closing business on April 20, 1915.

PERSONALS.—Dr. GEORGE A. GREEN (A. M. C. '12), is practicing at Mechanicville, N. Y.

—Dr. ROYAL E. LAGRANE (A. M. C. '12), is located at Glens Falls, N. Y.

—Dr. WILLIAM C. RAUSCH (A. M. C. '13), is engaged in active practice at 1094 Madison Ave., Albany, N. Y.

—Dr. CONRAD A. RISSBERGER (A. M. C. '13), is practicing at 473 South Pearl St., Albany, N. Y.

ENGAGEMENT.—The engagement of Dr. BURKE DIEFENDORF (A. M. C

'13), Hillsdale, N. Y., and Miss Bertha A. Mann, of Troy, N. Y., has been announced.

MARRIED.—Dr. NELSON K. FROMM (A. M. C. '08), Albany, N. Y., and Miss Rosalie H. Wasserman, of New York City, were married on March 8, 1915.

DIED.—Dr. ALEXANDER J. PEET (A. M. C. '77), formerly of Brooklyn, N. Y., died at his winter home in Miami, Fla.

—Dr. WILLIAM J. MURPHY (A. M. C. '81), died recently at his home in San Bernardino, Cal.

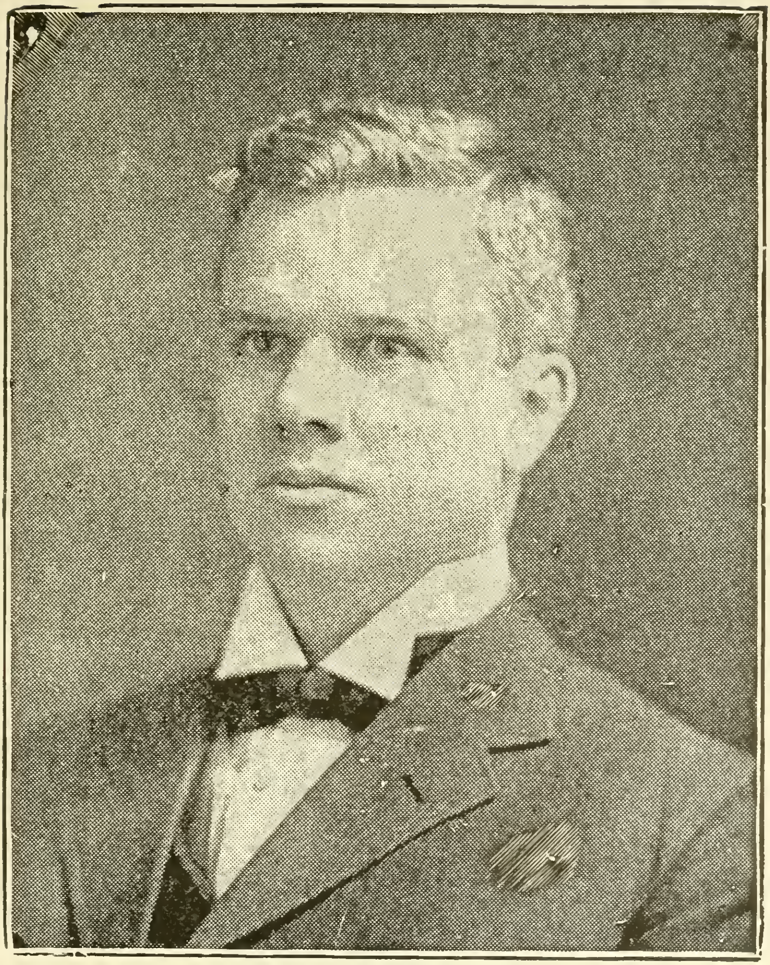
In Memoriam

THOMAS CARNEY, M. D.

The unexpected death of Dr. THOMAS CARNEY early Saturday morning, February 6, 1915, in the Johns Hopkins Hospital, Baltimore, Md., closed the successful career of one of the leading physicians of Schenectady, and a Major in the Second Regiment, N. G., N. Y. Dr. CARNEY was the guest of Contractor Charles Beckwith of the Union Paving Company of this city, who lives at the Hotel Emerson while he is engaged in extensive street paving in Baltimore. Friday evening the doctor was seized with violent hemorrhages of the stomach and was at once taken to the hospital for an operation. The physicians determined that blood transfusion was the only chance of saving the doctor's life, and Edgar Smith, proprietor of the Navarre Hotel of New York City, made the sacrifice. At the operation the stomach and all of the abdominal organs were found to be normal and there was no evidence of gastric ulcer, but the hemorrhage was found to come from an acute duodenal ulcer. Dr. CARNEY rallied slightly but toward morning began to fail rapidly and died at five o'clock.

Dr. CARNEY had a large practice in Schenectady and vicinity. In military circles he was senior major of the Second Regiment of Infantry and was considered one of the most competent officers in the National Guard of New York. He was a natural soldier, a good horseman, a man of fine appearance and stood high in the esteem of his men and the officers of the guard.

Major CARNEY enlisted as a private in the Thirty-sixth Separate Company April 23, 1894. He was appointed Corporal February 14, 1895; Sergeant December 18, 1896; First Sergeant April 15, 1898, and was mustered in as First Sergeant of Company E, Second Regiment, for service during the Spanish-American War, May 2, 1898. He served with his regiment, which was stationed at Camp Black, L. I., Chickamauga, Tenn., Tampa and Fernandina, Fla., and then returned home with the regiment and was mustered out of the volunteer service October 31, 1898. At his own request on January 9, 1899, Dr. CARNEY was honorably dis-



THOMAS CARNEY, M. D.

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charged from the company and was out of the guard until January 26, 1907, when he was appointed a Captain and assigned to duty commanding Company E. May 2, 1911, he was made a Major, which rank he held at the time of his death, and was assigned to command the Second Battalion, Second Infantry, composed of Companies E and F of Schenectady; H of Amsterdam and G of Gloversville. In July, 1913, Major CARNEY was assigned for duty on the Mexican border for three weeks.

Dr. CARNEY was born in Ilion, April 9, 1877. His father, who died when he was eleven years old, was Peter Carney, and his mother, who survives him and who lived with him in this city, was before her marriage, Mary J. Roach, of Ballston Spa. The Carneys moved to this city when the doctor was eight years old, and all have since lived here. Dr. CARNEY was a self-made man and earned his way through Medical College by hard labor. When only eleven years old he entered the employ of the General Electric Company as an office boy, and was one of the five who worked there. He learned the toolmaker's trade and by hard work accumulated enough money to enter the Albany Medical College. He completed his course with the Class of 1902. During vacations he worked at the General Electric plant at his trade. He was considered an especially bright student and because of his wide acquaintance, genial manner and skill was rewarded with a lucrative practice as soon as he opened an office in this city. Of his class there are now in Schenectady Drs. Reed, Jackson, Ham and Clark. The doctor was at first located at 508 State Street, the site of the present Stover and Spence building, but later he purchased and moved to his late residence and office at 615 State Street.

Besides his mother, Dr. CARNEY is survived by his wife, who was formerly Miss Rose Whyte, whom he married in 1903; a daughter Rosemary, aged eight; a sister, Miss Elizabeth Carney, and one brother, William Carney, all of whom live at the State Street residence. In social circles, the doctor was a member of the Mohawk Club, Mohawk Golf Club, Army and Navy Club in New York City and Rap-Shaw Club in the Adirondacks. He was also a member of the Elks and Spanish War Veterans. He attended St. John's Church.

The funeral was held from St. John's Church with full military honors. A battalion of infantry, the Second of the Second Regiment, composed of Companies E and F of this city; H of Amsterdam and G of Gloversville, acted as funeral escort. The body of Major CARNEY lay in state at his home, 615 State Street, from noon Monday until it was taken from the house shortly before 11 o'clock Tuesday morning to St. John's church, where a solemn high mass of requiem was celebrated by Right Rev. Mgr. J. L. Reilly, pastor of the church, assisted by Rev. Fr. Walsh of Ballston and Rev. Fr. McDonald of St. John's A quintet from St. John's choir concluded the service by the rendition of Proctor's "Heavenly Home."

STILLMAN S. HAM.

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ALBANY MEDICAL ANNALS

Original Communications

THE DIAGNOSIS OF CEREBRAL TUMOR.

Read before the Medical Society of the County of Albany, February 12, 1915,

BY LA SALLE ARCHAMBAULT, M. D.,
Professor of Neurology in the Albany Medical College, Albany, N. Y.

In order to arrive at an early diagnosis of cerebral tumor, an accurate knowledge and a correct interpretation of its symptoms are indispensable. While it would be superfluous to discuss at length the various symptoms of tumor of the brain, a general survey of their evolution and a brief reference to the clinical significance of some of them cannot well be omitted. In rare cases a cerebral tumor may be so situated as to give rise to no symptoms whatever and be discovered with surprise at the autopsy. This is exceptional, however, and in the vast majority of cases the symptoms appear early and soon give evidence of severe cerebral disorder.

The symptoms of cerebral tumor may be divided into (*a*) general symptoms common to all varieties and to all localizations, and (*b*) local symptoms which vary with the situation of the tumor.

The general symptoms are headache, vertigo and vomiting, psychic changes, convulsive seizures, disordered pulse and respiration and changes in the eye-grounds, more particularly choked disc. While we believe that most, if not all, of these general symptoms are due to increased intracranial tension or to associated internal hydrocephalus, none of them with the possible exception of choked disc is pathognomonic of cerebral tumor or even of hypertension. They occur in so many other diseases of the brain, both organic and functional, that they possess in themselves little if any diagnostic significance and furnish no clue whatever as to the nature of the underlying lesion. Choked disc, however, may justly be regarded as the signature of intracranial hypertension and indicates, in ninety per cent. of cases, cerebral tumor. Conversely, it may be stated that according to the most eminent clinicians, choked disc is present in ninety per cent. of cases of cerebral tumor. Unfortunately it must be admitted that when a definite choked disc becomes apparent, the causative tumor has either already attained considerable proportions or determined an equally deleterious ventricular distention. It is therefore highly important to establish a diagnosis of cerebral tumor before choked disc becomes well marked, and yet this is often rendered difficult by the fact that, in many cases, visual acuity is retained even when the process has reached an advanced stage, so that the eye lesion does not always betray itself by a corresponding functional deficit. If it were otherwise, we could count upon the ophthalmologist for a larger percentage of timely interventions. In this connection, it is important to recall that while choked disc is usually bilateral, it is frequently unilateral at the very start and may even remain so during an appreciable period. Inasmuch as in such a case the process is almost invariably situated on the same side as the tumor, it constitutes an exceptionally valuable sign since it not only affords an opportunity of intervening before generalized compression has occurred, but likewise serves, in a certain measure, the purpose of a localizing factor. A great advance would be realized if it were possible to sufficiently impress the general practitioner with the necessity and importance of careful perimetric examinations in all cases of suspected organic brain disease. It was shown by Harvey Cushing in 1909 that inversion or interlacing of the color-fields, not unlike that which occurs in hysteria, is a very common if not a usual phenomenon in the evolution of brain tumor, and, furthermore, that it is an early sign of intracranial tension and often becomes manifest long before choked disc can be recognized. Naturally the detection of such perimetric deviations or of beginning or unilateral choked disc represents the most precious means of establishing, when other factors are present, an early and positive diagnosis of cerebral tumor. The fact remains, nevertheless, that in the great majority of instances a positive diagnosis is rarely made before well marked and bilateral choked disc has developed and it is in the absence of this sign that the greatest difficulties are encountered. Under such circumstances we may be guided by either or both of the following factors: (1) a progressive increase in the intensity of the general symptoms, (2) the appearance of definite local symptoms which likewise exhibit a tendency to steadily increase in severity. In some cases local symptoms develop very early, in others they are tardy manifestations, in still others they are totally wanting throughout the entire course of the disease. The absence of local symptoms is particularly apt to characterize certain forms of tumor such as psammoma, lipoma, cholesteatoma and cysticercus, as well as tumors occupying the so-called silent areas of the brain, as for instance, the right frontal or the right temporal lobe. I shall return later to local symptoms under the heading of topical diagnosis and pursue for the present the further analysis of general diagnostic data.

As previously stated, there may be neither choked disc nor definitely localizing symptoms and then the diagnosis must rest exclusively upon the one remaining characteristic feature of cerebral tumor, namely, the gradual increase in the intensity of the general symptoms. Of these, the most constant, persistent and suggestive is undoubtedly headache, but before we can attach real significance to this headache, we must eliminate a large number of well known causes of headache. It must not be forgotten that headache may be due to uraemia, to migraine, to eye-strain, to syphilis, to arterio-sclerosis, to gastro-intestinal disorders or even simple constipation, to hysteria and neurasthenia, to toxic substances such as arsenic, lead, mercury, morphine, nicotine, etc., and to still other causes of lesser importance and too numerous to mention. Usually, however, it is not particularly difficult to rule out all of these causes one after another. Of the other general symptoms of tumor of the brain, the only significant or suggestive ones are the tendency to somnolence, the occasional occurrence of severe vomiting spells without adequate cause, and the slowing of the pulse rate. It is important to remember that the pulse is more apt to exhibit paroxysmal than persistent slowing: as is well known, the pulse rate may be reduced to 40, 30, or even less.

Thus, to summarize the preceding remarks, it may be said that the diagnosis of cerebral tumor is based upon (1) the gradual increase in intensity of general symptoms indicating severe cerebral disorder, (2) the presence of choked disc, (3) the development of localizing symptoms.

Of these three elements of diagnosis, the first only is practically constant; when coupled with choked disc the general diagnosis of cerebral tumor is firmly established. When all three factors are present both the general and the local diagnoses are ensured. The absence of choked disc however should never be regarded as sufficient to offset a diagnosis otherwise based upon the association of persistent general symptoms with definitely localizing signs.

Finally, in certain cases some help may be obtained, particularly in the way of confirming topical diagnosis, by a physical exploration of the skull conducted much in the same fashion as a physical examination of the chest. It is well known, for instance, that a more or less generalized tenderness on percussion of the cranium is a common finding in cerebral tumor; in some cases, however, percussion is only painful over a given circumscribed area and then this sign may possess distinct value. This is more apt to be the case when the tumor is superficial and springs either from the cortex, the meninges, or the inner surface of the skull. Macewen has pointed out that in tumor as well as in abscess of the brain, the percussion note may be of heightened pitch and of greater resonance over the seat or in the immediate proximity of the tumor. Auscultatory percussion of the scalp may likewise be helpful and it has been noted by some observers that the audibility of the transmitted sound of the tuning fork may be appreciably diminished over the tumor, particularly if the latter be a solid growth of fair volume or one situated near the skull. Lumbar puncture has sometimes been useful and tumor cells have been identified in the cerebrospinal fluid, but the practice is highly dangerous and a fatal issue may be the penalty of the attempt particularly in cases of cerebellar tumor. Lastly, radiography may prove of help in localizing tumors of the sella turcica, those containing bone (teratoid tumors), or those which have eroded or partly dissociated the cranial bones.

As regards the differential diagnosis of cerebral tumor, it must be said that there are very few conditions which can really occasion serious difficulty. By far the most important of these is unquestionably cerebral abscess. Between cerebral tumor and cerebral abscess the diagnosis is often difficult and sometimes impossible. Of course the pre-existence of otitis media or some other suppurative process will at once arouse suspicion, but how many cases of abscess have been recorded in which no primary focus of infection could be detected? The presence of fever strongly militates in favor of abscess and the same applies to leucocytosis, but let us not forget that the majority of cases of cerebral abscess exhibit throughout their course normal or subnormal temperatures and that changes in the blood-picture are inconstant. Changes in the mood and disposition of the patient, dulness, hebetude, sluggish cerebration, etc., occur certainly much earlier in abscess than in tumor, but it is often difficult to correctly evaluate the significance of these psychic changes. Convulsive seizures are far more common in tumor than in abscess, they frequently exhibit all the characters of ordinary idiopathic epilepsy and greatly predominate over the paralytic disorders. Cerebral abscess, on the contrary, is characterized by an almost complete inversion of features; at any rate, muscular twitchings and convulsive seizures follow rather than precede the onset of paralytic manifestations.

In a previous article, I called attention to the peculiar evolution of the hemiplegia which not infrequently develops in the course of cerebral abscess. It is a distinctly progressive hemiplegia in which the parts are not simultaneously but successively involved; in other words, it is constituted by the intervallary superposition of one monoplegia upon another and may require a week or more for its completion. Thus, the initial monoplegia may affect the upper extremity, after the lapse of three or four days the lower extremity becomes disabled, and finally a few days later the face shows evidence of palsy. This type of hemiplegia I regard as being practically diagnostic of cerebral abscess.

Between cerebral tumor and epilepsy the diagnosis may at times be difficult and there are authentic cases on record in which the only symptom of cerebral tumor present during a considerable period was the paroxysmal occurrence of convulsive seizures. Such cases must be very uncommon. In both epilepsy and tumor the convulsions may be generalized and associated with loss of consciousness, but in ordinary idiopathic epilepsy, of course, the convulsion remains the only symptom, the other manifestations of cerebral tumor are wanting. If choked disc is present in connection with either epileptiform seizures or coma, the diagnosis of cerebral tumor is assured. Likewise, the occurrence of transitory palsy of an extremity or part of it after a convulsive attack plainly indicates the existence of a local lesion.

Uncomplicated or so-called primary internal hydrocephalus is a very rare condition in the adult, but when it occurs it may simulate cerebral tumor in every particular and more especially tumor of the cerebellum inasmuch as it produces bilateral spasticity and sometimes tremor of the extremities, cerebellar ataxia and well marked optic neuritis or choked disc, besides all the general symptoms of tumor. The very slow course of the disease which presents many remissions and intermissions, the frequent and usually symmetrical implication of several of the cranial nerves (oculomotor, abducens, trigeminus, facial, etc.), the common occurrence of bitemporal hemianopsia, partial deafness and polyuria, the bilaterality of the objective disorders in the extremities and the absence of all focal hemispheral symptoms are all factors, however, which may be counted upon to establish the identity of the condition. It has been claimed by some observers that, even in the adult, internal hydrocephalus may produce some deformity or enlargement of the skull, but this hardly seems credible. Of course it must not be forgotten that sooner or later an associated internal hydrocephalus develops in a large percentage of cases of cerebral tumor.

Cerebral syphilis not infrequently yields a clinical picture identical in all respects with that of cerebral tumor. I refer not so much to the isolated intracerebral gumma which after all is neither more nor less than a cerebral tumor, although a far rarer one than is generally supposed, but to circumscribed gummatous meningitis, to the gummatous patch or placard more particularly of the convexity. It may give rise to all the general and local manifestations of the most classic cerebral tumor and exhibit the same progressiveness in the development and intensity of its symptoms. The much emphasized nocturnal headache is of meagre significance when we have learned to appreciate the fact that in cerebral tumor, whatever its nature, the headache is frequently attended with vesperal exacerbation, and, in some cases, essentially nocturnal in its appearance. It would be useless to pursue a lengthy discussion of the various points of differential diagnosis inasmuch as we are now able to avail ourselves of the reliable data furnished by laboratory methods. The unfailing and precocious cerebrospinal lymphocytosis and the positive Wassermann-Noguchi reaction obtained with the blood or the cerebrospinal fluid or both leave no legitimate excuse for an error in diagnosis. The same elements of differentiation are applicable to general paresis which may, in certain cases, closely resemble tumor of the frontal lobe.

While it is true that in the vast majority of cases cerebral tumor is characterized by the insidious and gradually progressive development of its symptomatology, it may, in rare cases, have an acute and even an apoplectiform onset. This is particularly apt to occur in vascular forms of glioma in which a large hemorrhage takes place. The first evidence of the existence of such a growth may be furnished by the abrupt appearance of coma with or without subsequent hemiplegia—a clinical state highly suggestive if not typical of apoplexy. The occurrence of such an attack in a young adult presenting no evidence of arterial degeneration, particularly if the Wassermann-Noguchi reaction be negative, should always make one suspicious. The history of prolonged headache and more especially the presence of choked disc will hardly leave, under such circumstances, any reasonable doubt as to the diagnosis.

There are still other conditions which may be confounded with cerebral tumor and among them hysteria and multiple sclerosis are mentioned in the majority of text-books. It is well known likewise that nephritis, lead poisoning, and anaemia, more particularly chlorosis, often give rise to cerebral manifestations which in some cases realize almost in its entirety the symptom complex of cerebral tumor. It would seem, however, that if the least care were exercised in the observation of the case and our actual methods of clinical diagnosis properly utilized none of these various conditions could possibly lead to an error in diagnosis.

There yet remains for us to consider the all important question of topical or regional diagnosis. This necessarily implies an intimate acquaintance with the actual doctrine of cerebral localization. The correct localization of a brain tumor is strictly dependent, indeed, upon an accurate knowledge of the functional losses resulting from disease of the various physiologic areas and centres of the brain. It must be remembered that the lesion of each individual area or centre betrays itself clinically by an essentially specific functional deficit, and naturally this regional manifestation will vary with the situation of the tumor. While it would be impracticable to pass in review all the possible local symptoms which may result from tumors of each individual area, it seems advantageous to mention the more significant and reliable data which we possess concerning important localizations.

Lesions of the frontal lobe (excluding the ascending frontal convolution) of either hemisphere, but more particularly of the left one, at least in right-handed individuals, often produce decided changes in the moral and mental characteristics of the patient, and while the resulting psychic manifestations may assume the most diverse types a more or less prominent deterioration of the higher intellectual attributes is the feature most commonly encountered. Of course it is a fact that some mental impairment may result from lesions involving any part of the cerebral cortex, but it is universally conceded nevertheless that frontal localizations are characterized by an especially striking and precocious development of psychic disturbance. Melancholic and maniacal states have both been observed but the more usual phenomena consist in progressive loss of memory and power of attention, lack of judgment, irritability and obstinacy, inability to exercise self-control and a marked inclination to disregard the ordinary concepts of tidiness and decency. Mental apathy together with a persistent tendency to somnolence is regarded by many as a focal sign of frontal lobe disease. A peculiar and interesting form of psychic disorder has been described by Jastrowitz under the name of *moria* and by Oppenheim under that of *Witzelsucht;* it is characterized by a state of happy indifference, total lack of realization of the gravity of the illness and an habitual tendency to undue and even morbid jocularity. The patient constantly tries to amuse his surroundings and seizes every opportunity to exhibit his wit and humor. In this connection it is significant to recall the exuberance and megalomania of general paresis, in which disease, as is well known, the meningo-encephalitic lesions predominate over the fronto-parietal region.

In tumors involving more particularly the mesial surface of the frontal lobe a more or less marked titubation, or insecurity of station and gait, may result, which cannot be distinguished from the ataxia produced by cerebellar disease.

Convulsive seizures occurring in connection with frontal lobe tumors are not infrequently ushered in or accompanied by exaggerated contralateral conjugate deviation of the head and eyeballs, and sometimes the entire trunk participates in the rotary deviation.

It is a classic dogma that lesions of the left inferior frontal convolution in right-handed individuals give rise to motor aphasia or loss of articulate speech, but the doctrine has not yet received universal recognition. A few cases are on record in which a lesion of the base of the left middle frontal convolution apparently produced motor agraphia or inability to write, without concomitant motor weakness of the correlated musculature of the upper extremity.

It has been claimed by Granger Stewart that absence, diminution, or rapid exhaustion, of the contralateral abdominal reflex, and a fine rapid vibratory tremor in the limbs on the same side are suggestive of tumor of the frontal lobe.

Very recently it has been advanced by Foster Kennedy that tumors or abscesses involving the inferior or orbital surface of the frontal lobe produce homolateral retro-bulbar optic neuritis, central scotoma and optic atrophy, and contralateral choked disc. The anatomic justification of this assumption is clearly evident, but as far as I know corroborative data have not been furnished thus far by other observers; nevertheless the finding is an interesting one and may yet prove to be of great diagnostic importance. Tumors in the same situation may likewise compress or otherwise involve the olfactory tract and produce anosmia.

Tumors situated in or near the motor area or central convolutions give rise to the well known phenomena of Jacksonian epilepsy, and to gradually progressive paralytic disorders which are essentially monoplegic in type although they may subsequently exhibit a more extensive distribution. Persistent pains and especially paraesthesiae limited to one extremity also occur, but by far the most significant sensory disturbance consists in impairment or loss of the stereognostic sense without associated involvement of the ordinary elementary forms of objective sensibility, *i. e.,* without the co-existence of definite anesthesia and analgesia. It is a fact, however, that astereognosis likewise results from lesions of the supramarginal gyrus, and it may well be questioned, therefore, if the occurrence of this symptom in tumors of the Rolandic area is not due in reality to implication of the adjoining portion of the supramarginal convolution.

Lesions of the parietal lobe (excluding the posterior central convolution) produce a variety of important disturbances, but perhaps the most significant of them all is loss of muscle sense together with motor apraxia and astereognosis in the contralateral extremities. This symptomatic triad is particularly associated with lesions of the anterior segment of the supramarginal gyrus and the contiguous portion of the superior parietal lobule.

Deep seated lesions of the supramarginal and angular gyri may determine contralateral hemianopsia by involving the optic radiation of Gratiolet, and they may likewise produce conjugate deviation of the head and eyeballs particularly if they encroach upon the corpus callosum.

In right-handed individuals the lesion of the left angular gyrus not infrequently determines well marked alexia. This alexia is often accompanied by agraphia (sensory agraphia of Déjerine and Oppenheim), and sometimes by optic aphasia and right-sided hemianopsia as well.

Another interesting disorder which may result from lesions of the angular gyrus is a disturbance of optic orientation known as astereoscopy and characterized essentially by defects of accommodation, such as the inability to estimate distances and to correctly appreciate the relative position of objects in space. It must be stated, however, that this disorder has been observed mainly in cases of bilateral disease.

Occipital localizations are characterized essentially by the presence of contralateral homonymous hemianopsia with preservation of the macular field of vision. While this symptom may result from tumors situated in any part of the occipital lobe, it is particularly constant in lesions which involve the calcarine region. In rare cases, the limitation of the lesion to either the superior or inferior lip of the calcarine fissure has produced a typical quadrantal defect which has been called quadrantic hemianopsia, or more correctly, tetranopsia. The contralateral lower quadrants of the field of vision are lost when the lesion involves the superior lip of the calcarine fissure and *vice versa.* Visual hallucinations, scintillating scotoma and hemiachromatopsia, frequently are prodromal manifestations of hemianopsia in occipital tumors and may be of great value for early diagnosis.

Lesions of the convexity of the left occipital lobe in right-handed individuals may give rise to a peculiar disorder known as psychic or mind blindness. In this condition, the patient undoubtedly retains some degree of vision as he avoids obstacles in walking, but he does not understand or correctly identify what he sees and no longer recognizes what was formerly familiar and well known to him, such as his house, his food and even the members of his own family. It is a fact, however, that in the majority of reported cases, mind-blindness was associated with more or less complete double hemianopsia and resulted from bilateral disease of the occipital lobes. Another interesting symptom which may occur in lesions of the left occipital lobe in right-handed individuals is optic aphasia, a condition in which the patient cannot give the name of an object held before his eyes although he sees it clearly enough, recognizes it perfectly and can even explain or otherwise indicate its use or purpose. Optic aphasia only occurs in lesions which involve the association fibres running between the temporal and occipital lobes and therefore in lesions which occupy more particularly the transition zone between these two lobes (posterior extremity of second and third temporal convolutions and contiguous portion of the occipital convexity). Optic aphasia may occur alone, but frequently it is accompanied by alexia and hemianopsia and sometimes by partial sensory aphasia.

Finally, it is well to remember that occipital tumors which have attained considerable proportions may produce pontine and especially cerebellar symptoms as the result of pressure, despite the protection afforded by the ordinarily resistant tentorium.

Tumors of the right temporal lobe, an essentially silent area in the classic sense, may reach considerable size and yet produce no definite signs of local cerebral disorder. It is all otherwise when the lesion involves the left temporal-lobe and more particularly the posterior extremity of the first and second temporal convolutions. In right-handed individuals, implication of this area almost invariably leads to the development of sensory aphasia or loss of the power to understand spoken language. The degree of this functional disorder may be variable in the extreme, but a measurable loss of sensory speech is practically constant, and it may be said that Wernicke's aphasia represents one of the most solidly founded of our anatomo-physiological data. Alexia is often associated with sensory aphasia and agraphia may likewise be present.

Tumors situated in the antero-median segment of the temporal lobe and involving the uncinate gyrus have in many cases produced peculiar attacks known as uncinate fits. These attacks are ushered in by intensely disagreeable olfactory or gustatory hallucinations and characterized by violent smacking and sucking movements of the lips and mouth and sometimes by movements of mastication or swallowing. Consciousness is usually retained, though commonly perturbed, and not infrequently there is associated a dreamy state in which the patient is obsessed by a sense of unreality. Convulsive seizures may or may not accompany these peculiar manifestations. Tumors occupying this same region occasionally produce upper quadrantal defects of the field of vision by involving the ventral détour of the geniculo-calcarine fibres coursing to the lingual lobule.

Deep-seated or subcortical tumors occupying the middle segment of the cerebral hemisphere involve sooner or later the basal ganglia and the enclosed internal capsule. The implication of the anterior limb of the internal capsule often produces no characteristic symptoms, although cerebellar ataxia (fronto-cerebellar tract), choreiform or ataxic movements in the contralateral upper extremity and emotional disturbances have been observed in a few carefully recorded cases. The involvement of the posterior limb of the internal capsule manifests itself by contralateral hemiplegia, hemianesthesia and hemianopsia. If the lesion is situated in the left hemisphere the hemiplegia may be accompanied by motor aphasia.

Localizations affecting the caudate and lenticular nuclei do not yield a characteristic symptomatology in the strict sense of the word. By reason of its actual contiguity the internal capsule is almost necessarily encroached upon and hence the above mentioned capsular symptoms are commonly present. It must be said, however, that recent researches have thrown some light upon the probable physiology of the corpus striatum and that some fairly significant data have been supplied by competent observers. In a number of cases, a very decided and persistent elevation of body temperature has been noted. Choreiform and athetoid movements, Parkinsonian tremor and other convulsive or spasmodic manifestations in the contralateral extremities have repeatedly been encountered in lesions involving either the lenticular nucleus itself or the structures bordering directly upon it (external capsule, retro-lenticular zone, etc.). I have seen several cases of left-sided lenticular disease (circumscribed encephalomalacia, intranuclear hemorrhagic cyst), in which anarthria or marked dysarthria, spasmodic laughter and crying, slight contralateral motor weakness and vesical incontinence were the main manifestations and believe that this syndrome probably embodies the most characteristic features of intrinsic lenticular localizations. This supposition is in perfect accord, moreover, with the clinical aspect of the disease recently described by Wilson under the name of "progressive lenticular degeneration."

Lesions limited to the optic thalamus do not produce hemiplegia, but do give rise to persistent contralateral hemianesthesia which may affect all forms of superficial and deep sensibility, although in general the latter is far more severely disordered. These objective losses are commonly accompanied by obstinate paroxysmal pains of exceptional intensity. Contralateral hemiataxia, choreiform and athetoid movements have frequently been observed. A peculiar contralateral facial phenomenon has been described consisting in unilateral palsy of the facial musculature upon emotional display with preservation of volitional contraction. By many this is regarded as a focal sign of exceptional value. Finally, contralateral vaso-motor disturbances may occur, such as oedema, elevation of surface temperature, hyperaemia and hyperidrosis.

Lesions of the quadrigeminal region and more particularly of the anterior colliculi produce dilatation and immobility of the pupils and, owing to the proximity of the oculomotor nuclei, more or less pronounced ophthalmoplegia. A bilateral palsy of homologous muscles is especially characteristic and the limitation of ocular excursion is commonly restricted to the upward and downward movements of the eyeballs. The involvement of the posterior colliculi may manifest itself by a varying degree of deafness, passive tremor, and cerebellar ataxia with especial tendency to fall directly backward.

Tumors of the cerebral peduncle produce, if distinctly unilateral, the typical Weber syndrome characterized by homolateral oculomotor palsy and contralateral hemiplegia. Sometimes the Benedikt syndrome is realized instead, and the oculomotor palsy on the side of the lesion is associated with contralateral tremor which may be of the intention type though usually of the Parkinsonian variety. The latter syndrome is particularly apt to result when the peduncular lesion involves mainly the red nucleus and the substantia nigra. More or less cerebellar ataxia is frequently associated with Benedikt's syndrome. In other cases, the lesion of the peduncular tegmentum gives rise to homolateral oculomotor palsy and contralateral hemiataxia.

Tumors of the pineal body may give rise to practically the same symptomatology as that due to primary involvement of the quadrigeminal bodies owing to the ease with which they exert pressure upon these structures. It has been recently shown, however, that they may also produce, particularly if they occur in early life, a perfectly autonomic syndrome known as "macrogenito-somia." This condition is characterized by precocious and exaggerated development of the sexual organs, prematurity of thought and speech and general body overgrowth. The symptom-complex has been best observed in male children.

Tumors of the pons and medulla are characterized by the predominance of focal manifestations and the insignificance of symptoms of intracranial hypertension. Choked disc is frequently wanting and convulsions are rare. Perhaps the most typical focal symptom of tumor of the pons is alternating or crossed paralysis, *i. e.*, palsy of the facial, abducens and trigeminus (or only one of these) on the side of the lesion, and of the extremities on the opposite side. Of course this only holds good in cases of unilateral localization, and, as in the majority of instances the neoplasm involves more or less diffusely the greater part of the pons, some evidence of bilaterality is to be expected sooner or later and then dysarthria and dysphagia likewise develop. Tumors of the pons generally compress or otherwise implicate the cerebellar peduncles and thus determine cerebellar ataxia, the tendency being to fall or sway toward the side of the lesion if the tumor be distinctly unilateral. A very characteristic symptom of superior pontine localizations is loss of conjugate or associate lateral movements of the eyeballs with preservation of vertical excursion and convergence. The involvement of the fillet of course will manifest itself by corresponding sensory losses both objective and subjective. The other symptoms which have been described in connection with pontine tumors and which deserve mention are paroxysmal hyperpyrexia, sialorrhea, albuminuria, polyuria and frequent incontinence of the organic reflexes.

Tumors of the medulla resemble in general tumors of the pons and produce unilateral or bilateral paralysis of the extremities together with symptoms referable to the involvement of the eighth to the twelfth cranial nerves. Hence deafness, anarthria or dysarthria, aphonia or dysphonia, dysphagia, hypoglossal palsy, hiccough and various cardio-respiratory disturbances may occur in all possible combinations. Cerebellar ataxia is very common and homolateral or contralateral motor ataxia may likewise develop. Secretory and vasomotor disturbances are not uncommon, and homolateral loss of sweating or contralateral increase of sweating has been repeatedly noted. Glycosuria and diabetes insipidus have likewise been observed in a fair number of cases. Myosis, enophthalmia and incomplete ptosis on the same side as the lesion are important focal manifestations.

Tumors of the cerebellum, in contradistiction to tumors of the pons and medulla, are characterized by the early and prominent development of the general symptoms of increased intracranial pressure. Optic neuritis or choked disc is present in approximately ninety per cent. of cases, and vertigo and vomiting are apt to be particularly persistent and distressing. The headache is usually suboccipital, but not infrequently it is frontal as well and in some cases it is exclusively frontal. The most constant and characteristic focal symptom of cerebellar disease is probably cerebellar ataxia although we know that this symptom may likewise result from involvement of either the superior or middle cerebellar peduncle. Cerebellar ataxia is practically constant in lesions of the middle lobe or vermis. When the lesion is strictly confined to either cerebellar hemisphere the typical cerebellar gait may be wanting entirely or manifest itself simply by lateropulsion, and, contrarily to what is stated in the majority of text-books, the tendency is to fall or sway toward the side of the lesion. Tremor is a frequent manifestation and very commonly resembles the intention tremor of multiple sclerosis; likewise, the speech may exhibit the same peculiar scanning and explosive features observed in this disease. In fact, it may be admitted, I believe, that intention tremor and scanning speech do not occur in multiple sclerosis, unless the cerebellum and its peduncles are materially involved by the sclerotic patches. Another common symptom is nystagmus, and when the lesion is essentially unilateral the oscillations become manifest particularly or only when the eyes are turned toward the side of the lesion. A more or less marked rigidity or retraction of the head, or a tendency to hold the head in certain fixed positions, usually to one side, is very common in cerebellar tumor, and sometimes the entire trunk likewise assumes a definite abnormal attitude. The symptoms recently described by Babinski, more particularly asynergy, hypermetria and adiadochokinesis, have not received the recognition which they deserve as they unquestionably represent valuable signs of intrinsic disorder of the cerebellar mechanism. When the lesion is unilateral or limited to one cerebellar hemisphere these manifestations occur on the same side. The pressure of such a hemispheral tumor upon the pons and medulla explains the occasional occurrence of homolateral facial palsy, trigeminal neuralgia and auditory disturbances, and of contralateral spastic paralysis of the extremities. Not infrequently a false hemiplegia develops on the same side as the lesion; it is constituted not so much by actual motor weakness as by a state of atony or flaccidity of the musculature of the extremities accompanied by marked diminution or even abolition of the tendon reflexes. This hemiatony is commonly associated with hemiataxia. Finally, convulsive seizures, unilateral or bilateral, may occur in the course of cerebellar tumor, and likewise certain attacks of opisthotonos or of tetanic rigidity involving more or less completely the entire musculature of the body during which consciousness usually remains intact.

The symptomatology of tumors of the pituitary body or hypophysis cerebri has received abundant attention in recent years and such excellent monographs have appeared on the subject that it would be needless to incorporate in this article any exhaustive review of the various symptom-complexes which may be associated with hypophyseal localizations. The most important focal manifestations are due to disordered glandular function and to involvement of the visual apparatus. The perturbation of glandular function may reveal itself by perverted nutritional states indicating either increased or diminished glandular activity, or, in other words, by evidences of either hyperpituitarism or hypopituitarism. In the first case, we have to do with the familiar picture of gigantism or acromegaly, depending upon whether the manifestations appear early in the course of development or only in adult life; in the second case, the adiposo-genital syndrome of Fröhlich is the type of nutritional disturbance encountered. It is now pretty generally conceded that acromegaly is associated essentially with simple hypertrophy or adenomatous tumor of the pituitary body, whereas the Fröhlich syndrome results from pressure atrophy of this gland determined by a tumor springing either from this structure itself or from neighboring parts. The visual disorders consists in amblyopia, bitemporal though sometimes homonymous hemianopsia and primary optic atrophy. Optic atrophy occurs in about fifty per cent. of cases whereas choked disc is usually absent. Pressure upon the oculomotor nerve may give rise to ophthalmoplegia though this is rare. Exophthalmos has been noted in some cases. Anosmia may result from implication of the olfactory system. Finally, glycosuria is very common and is frequently accompanied by polyuria, polydipsia and polyphagia.

Extra-cerebral tumors occupying the fossae of the base of the skull manifest themselves mainly by symptoms referable to involvement of the cranial nerves. Tumors of the anterior fossa may thus determine anosmia, amblyopia and optic atrophy, ophthalmoplegia (oculomotor) and neuralgic pains in the forehead (ophthalmic division of the trigeminal). If the tumor is so situated as to simultaneously compress the mesial surface of both frontal lobes, cerebellar ataxia may result. Tumors in the middle fossa are apt to involve the Gasserian ganglion and determine obstinate trigeminal neuralgia and later keratitis neuro-paralytica. Likewise the oculomotor and abducens nerves may be compressed and a varying degree of ophthalmoplegia is noted in the majority of reported cases. Tumors in the posterior fossa may involve, either on one or both sides, any of the cranial nerves from the sixth to the twelfth and usually produce symptoms resulting from actual compression of the brain-stem (medulla, pons and cerebellum).

A seat of predilection for extra-cerebral basilar tumors is the cerebello-pontine angle and a large number of cases of this kind have been reported. Tumors in this situation may give rise to an exceptionally varied symptomatology; nevertheless, certain features are particularly characteristic and among them the so-called cerebellar seizures described by Dana. These attacks consist in loud tinnitus or roaring sound, vertigo, a tendency to fall to the ground or to pitch in one direction, a sudden blindness or loss of consciousness and, in severe attacks, tonic spasms of the extensors lasting several minutes. Other symptoms equally important are partial deafness, homolateral paresis of the facial musculature and loss or diminution of the corneal reflex, pain in the domain of the occipital nerve, limitation of associated lateral movement of the eyeballs towards the side of the tumor, slight ataxia of the arm on the same side and sometimes a certain degree of dysarthria and dysphagia.

If I have taken up in detail the focal symptomatology of one region after another, it is not because I nourish the vain hope that the correct localization of a brain tumor will greatly multiply the chances of its surgical extirpation; the statistics based upon the conjoined efforts of the most eminent neurologists and the most skilled surgeons show only too plainly that the percentage of removable tumors is extremely small, hardly more than seven per cent. Nevertheless, accurate localization retains all its significance on account of its important bearing upon the choice of operative procedure as well as upon the determination of the point at which the skull should be approached in order that intervention may yield its maximum benefit.

THE PATHOLOGY OF BRAIN TUMORS.

Read before the Medical Society of the County of Albany, February 12, 1915.

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In the study of most organs, it is the nature of the lesion that interests us. In the central nervous system, however, the location of a lesion and the symptoms depending upon its location are often of greater importance than its histological nature and receive the greater attention. It is perhaps due to this fact that there is no exact uniform classification for the multiform growths that arise from the brain and its membranes.

Brain tumors are quite frequent. Almost every form of new growth may occur in the cranial cavity. The most commonly encountered types are glioma, sarcoma, tuberculoma, syphiloma or gumma, endothelioma, carcinoma, fibroma, psammoma, lipoma and cholesteatoma. Tuberculoma and gumma are considered in this classification, although they are not, strictly speaking, true tumors, but are inflammatory in nature or infectious granulomata. Because of their frequently close similarity in gross appearance and symptomatology, they may well be listed as brain tumors. In no other part of the body, however, are such nodules regarded as tumors.

The most common of the true tumors is undoubtedly the glioma. An examination of the records of the Bender Laboratory shows a series of twenty-eight brain tumors. Of these, twelve were gliomata, five sarcomata, one endothelioma, one tuberculoma, three gummata, two cholesteatomata, one psammoma, one carcinoma, and two lipomata. Although this is a small number to draw conclusions from, the proportions correspond quite closely to those reported in larger series. In a study of 265 cases at the National Hospital, London, Howard H. Tooth cites the following figures: Glioma, fifty-five per cent., endothelioma fourteen, sarcoma eight, carcinoma six, tuberculoma five, cholesteatoma seven-tenths, pituitary one, and pineal one per cent.

Cushing, in a series of seventy operative cases, reports twenty-seven gliomata, seven endotheliomata, one sarcoma, one carcinoma, four gummata, four tuberculomata, one osteoma, one ecchinococcus cyst, five mixed tumors, seventeen pituitary, and fifteen pineal adenomata. His well known pioneer work in pituitary and pineal surgery accounts for the apparently high percentage of growths in these locations.

Glioma. A tumor may be defined as a new formation of cells possessing various characteristics of the cells from which it arises and which tends to proliferate continuously and without control. From this definition it can be understood that a true primary tumor of the brain would be one, the cells of which arise from, and possess characteristics of brain tissue cells. Such a tumor is a glioma and is always primary. This tumor arises from and is composed of neuroglia cells. It should be remembered that neuroglia cells are the so-called " mossy " and " spider cells " producing the numerous glial fibrils which form the supporting structure for the more actively functionating ganglion cells and their processes. Neuroglia may be likened in function to the supporting connective tissue of other organs. It is, however, epiblastic in origin, being formed from the embryonic ecto-

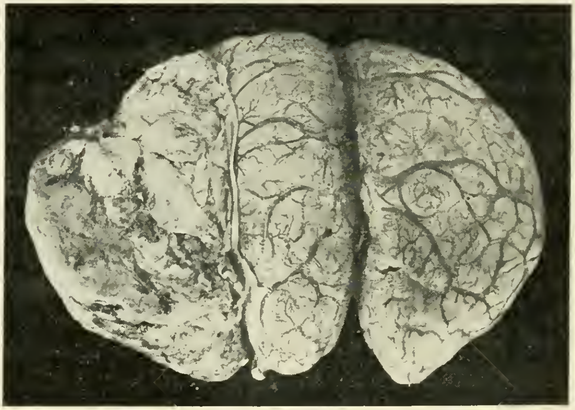

FIG. 1. A-11-74—Glioma of left parietal lobe with large hernia cerebri. Posterior aspect of brain. Six months after decompression operation.

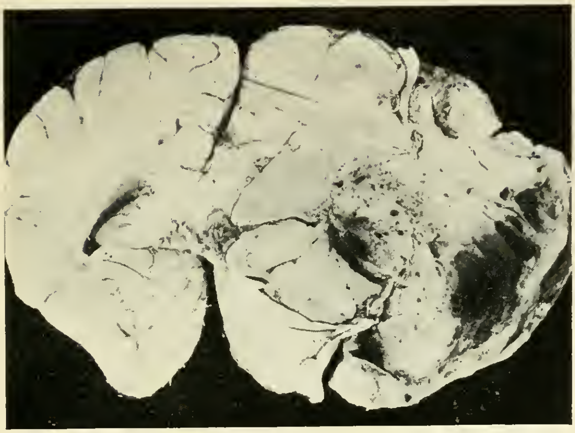

FIG. 2. A-11-74—Anterior surface of Fig. 1.

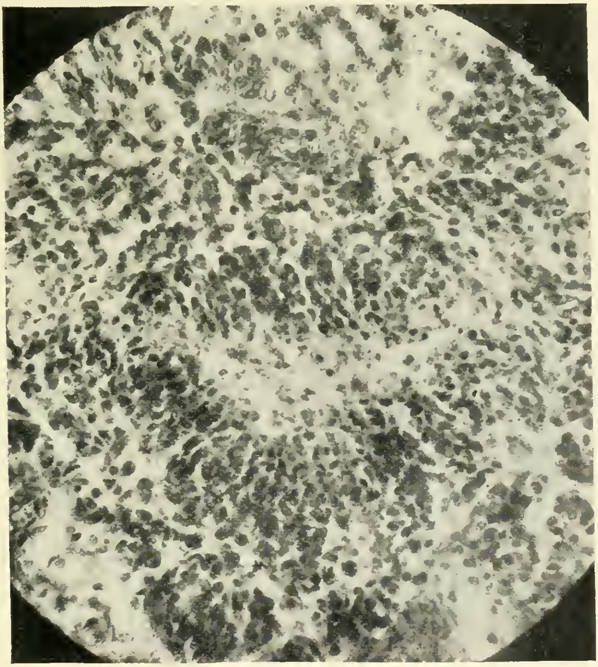

FIG. 3. O-1283—Glioma showing characteristic rosette arrangement of its cells. Micro-Photograph 150x.

derm and cannot be considered as a true connective tissue which is always of mesoblastic origin. The numerous minute interlacing fibrils produced by the neuroglia cells are termed glial fibrils. They give a characteristic reaction with certain staining

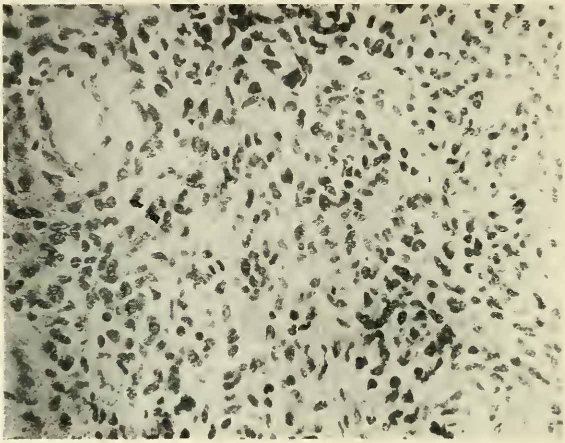

FIG. 4. A-13-39—Glioma similar in appearance to sarcoma. Micro-Photograph 120x.

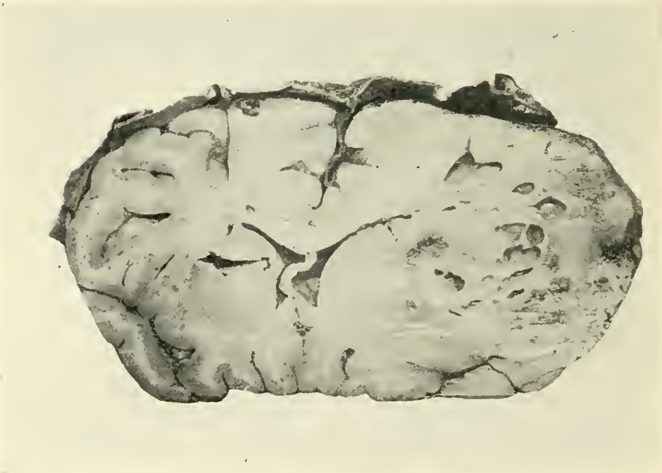

FIG. 5. A-13-39—Glioma of right parietal lobe. Cystic areas of degeneration are present.

reagents and can be definitely differentiated from the fibrils of fibrous connective tissue. Thus it is that in the examination of a brain tumor, the presence of glial fibrils straightway marks it as one of neuroglia tissue or a glioma. The presence of these fibrils determines it to be a glioma and not a sarcoma or true connective tumor which it so often simulates microscopically.

This tumor then is one composed of neuroglia cells producing the characteristic glial fibrils. The microscopical picture varies greatly. Rapidly growing tumors are characterized by a great predominance of the neuroglia cells with a comparatively small number of intercellular glial fibrils, while on the other hand the less rapidly growing types show the formation of glial fibrils in great numbers with a relatively small distribution of cells. Occasionally there is a characteristic rosette arrangement of the cells as shown in Fig. 3.

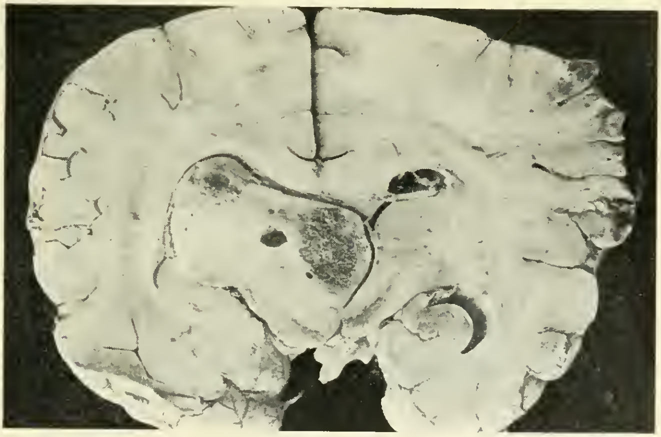

FIG. 6. A-14-29—Glioma of left basal ganglia. Marked distortion of lateral ventricle.

Grossly the glioma is usually of the same consistence as brain tissue. It is rarely sharply circumscribed, but merges imperceptibly into the surrounding brain tissue. For this reason, this tumor is not often a favorable one for operative removal, although occasionally definite encapsulation may be present. A great tendency is noted in all glioma tissue to early degeneration with liquefaction, forming numerous cysts. These tumors are very vascular and most often grow rapidly, destroying brain tissue. They rarely, if ever, matastasize to distant parts. In one of the cases autopsied by Dr. Blumer, an irregular ulcerating tumor mass presented on the forehead. This, however, was found to be a direct extension from a glioma of the frontal lobe, which had eroded through the frontal bone. The length of time from the onset of the first symptom until death varies greatly. Tooth gives six weeks to nine years with an average of 16.2 months as "the survival period."

Of the twelve cases of glioma on our records, three were located in the parietal lobe, two were frontal, two cerebellar, and five in the basal ganglia. The average age at death was fifty-one years.

Sarcoma. Sarcoma is a malignant tumor arising from connective tissue. In the brain it may be primary or secondary. Connective tissue in the brain is small in amount and limited in distribution to the membranes and perivascular sheaths. A primary

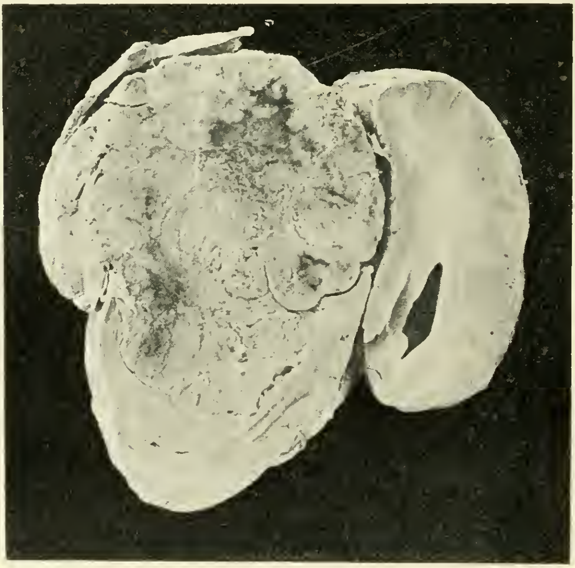

Fig. 7. A-11-36—Enormous sarcoma involving nearly the entire hemisphere. Distinct demarcation is present.

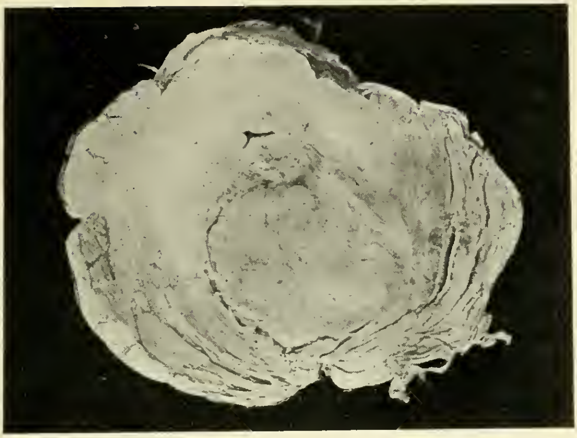

FIG. 8. S-14-845—Small round cell sarcoma—cerebellum.

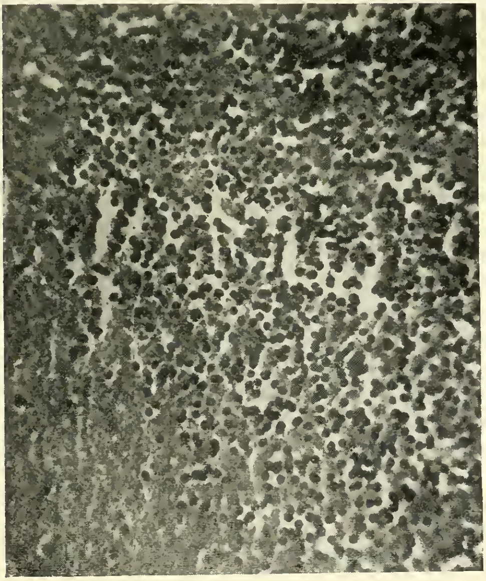

FIG. 9. S-14-845—Small round cell sarcoma. Micro-Photograph 120x.

sarcoma of the brain must then take its origin from the above mentioned parts.

This tumor is more often definitely encapsulated, it is of firm consistence, and compresses and indents rather than infiltrates the brain tissue. It is therefore more favorable for operative removal. All forms of sarcoma may occur, the spindle-cell and round-cell types being most often noted. Microscopically, they sometimes present considerable difficulty in the differentiation from a glioma. In doubtful cases, the absence of glial fibrils in specially stained sections usually differentiate it from the glioma, which it may closely resemble. Of the four cerebral sarcomata in our records, three were primary and one secondary.

Endothelioma. An endothelioma is a tumor, the cells of which are derived from the endothelial cells lining blood and lymph vascular spaces. These cells tend to form irregular and atypical vascular spaces. As a brain condition, this tumor most commonly occurs as a circumscribed growth in the dura mater and is called the dural endothelioma. In this location there is noted

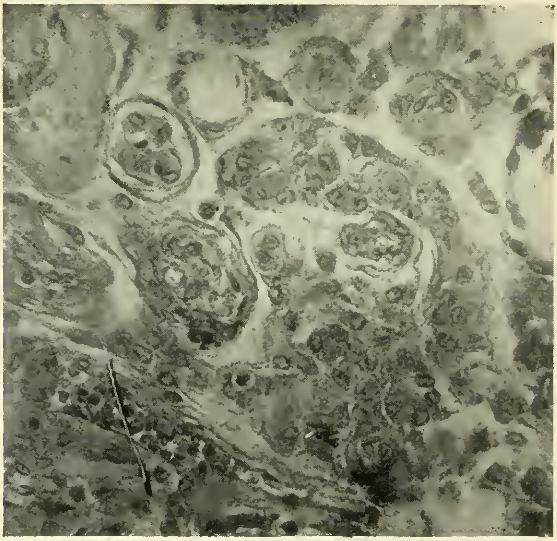

Fig. 10. O-1347—Dural endothelioma. Micro-Photograph 200x.

a characteristic tendency to the formation of large and concentric masses of cells or whorls. Subsequent hyaline degeneration of these whorls is quite frequent, giving rise to a condition simulating the epithelial pearls of epidermoid carcinoma.

This tumor is generally considered as benign and rarely shows any tendency to invade the brain tissue. It may, however, exert a great deal of internal pressure in its growth, causing atrophy of brain tissue with characteristic symptoms. It also occurs in the pia-arachnoid and the choroid plexus.

The one case observed by this laboratory measured one centimeter in diameter and was located in the dura over the parietal lobe. It gave rise to no symptoms during life and was in no way accountable for the death of the individual. These tumors may often attain a large size.

Tuberculoma. This condition is commonly known as the solitary tubercle. It is a circumscribed, walled-off mass of tubercu-

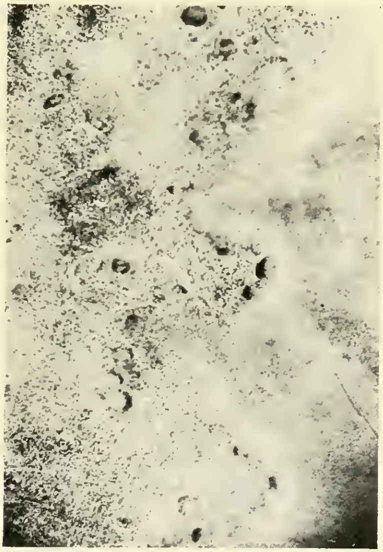

FIG. 11. A-12-44—Solitary tubercle. Section through peripheral zone showing central necrosis, tuberculous granulation tissue with giant cells. Micro-Photograph 60x.

lous material found in the substance of the brain. It presents the characteristic picture of central caseation with a peripheral zone of confluent tubercles and dense granulation tissue. They are often multiple and may be four to five centimeters in diameter. They produce their symptoms through pressure and interference with the circulation. They are quite common in children and are nearly always accompanied by tubercle lesions elsewhere. The terminal condition is often one of acute miliary tuberculosis. The one case of our records showed three solitary tubercles averaging four centimeters in diameter, located in the parietal, occipital and temporal lobes. There was an accompanying miliary tuberculosis of the lungs, liver and spleen.

Syphiloma or Gumma. The most common seat of this tumor is the base of the brain. Symptoms pointing to a tumor at this location should lead one to suspect a gummatous involvement. The pia arachnoid is primarily involved with extension of the process into the cortex. Next to the base, the frontal and parietal portions are most commonly affected. They may be single or multiple and rarely attain a diameter greater than three centimeters. When multiple, a coalescence of the individual gummata often occurs with a large diffuse involvement of the cortex. Histologically these tumors have the typical appearance of syphilitic tissue elsewhere and are surrounded by a dense zone of granulation tissue. Because of the slowness of absorption of this granulation tissue by therapeutic means, the operative removal of accessible gummata may be indicated.

Carcinoma. This is always a secondary or metastatic tumor in the brain. It may perhaps be of interest to cite the following unusual case embodied in our records. A woman fifty-two years of age presented definite symptoms of brain tumor. At operation a very vascular diffuse tumor mass was found involving the parietal lobe with erosion into the parietal bone. Microscopical examination of portions submitted showed normal thyroid gland histology. It had been noticed that the patient presented a unilateral moderate enlargement of the thyroid. No symptoms referable to this condition were present and in the presence of definite symptoms pointing to brain tumor, no importance was placed upon the thyroid hypertrophy. The woman died shortly after operation and although no post-mortem examination was obtainable, it is safe to presume that a malignant tumor of the thyroid gland was present. This was in the nature of a carcinoma with normal thyroid histology and had rapidly metastisized to the brain, where it gave rise to the definite symptoms of a primary brain tumor.

Cholesteatoma. This form of tumor is essentially a brain condition. It is a curious but interesting tumor, the exact nature of which is not understood. It is found more particularly in association with the membranes of the brain and is characterized by the presence of little pearly nodules. These are formed by clusters of cholesterin crystals. Because of this fact it is also known as the " Pearl tumor." In appearance and structure these tumors otherwise resemble the endothelioma and are regarded as such by many observers.

Psammoma. This is a tumor of doubtful origin, but like the cholesteatoma it bears a resemblance to the endothelioma. They present throughout their substance numerous calcareous concretions, simulating corpora amylacea. These tumors may be scattered beneath the dura and within the choroid plexus. When of small size they are commonly known as Brain Sand. Both the psammoma and the cholesteatoma are essentially benign tumors. They are usually discovered when their presence was not suspected during life.

Tumors of the pituitary and pineal glands are comparatively rare. They usually occur as simple hypertrophies or adenomata.

Parasitic cysts have been described and may be considered with tumors of the brain. They are of very infrequent occurrence and have been more often recorded in Austrian and German publications then in this country.

Other varieties of tumor, such as lipoma, fibroma, myxoma, angioma, osteoma, which may occur in the brain are of great rarity and consequently of little importance.

The appearance of a brain in which a tumor has developed is usually characteristic. There is an increased tensity of the membranes, a flattening of the convolutions through pressure, and a distension of the ventricles with fluid. The weight of the brain is increased and there is a distinct asymmetry of the two hemispheres with a sense of increased resistance over the affected side.

Tumors may be found in any part of the brain substance and may occur at any age. The resulting symptoms are affected little by nature or variety of tumor growth, but depend almost entirely upon its location, size and the amount of atrophied and destroyed brain tissue. Only a very small proportion afford a favorable field for surgical interference.

THE TREATMENT OF BRAIN TUMORS.

Read before the Medical Society of the County of Albany, February 12, 1915,

By DAVIS BAKER, M. D.,

The treatment of a person afflicted with a tumor of the brain presents one of the most difficult problems that a medical man can meet. It is admitted by all that the only hope of relief rests on surgical intervention, but until very recently there was little definite knowledge available to the surgeon when called upon to deal with an intracranial growth. Many facts have been made known during the past year by the publication of the results of the treatment of several large series of cases of intracranial tumor. Tooth, of London, has made a very careful study of the records of 265 cases operated on at the National Hospital, London, by Sir Victor Horsley and his colleagues; Von Eiselsberg and Ranzi have published the results of 168 cases operated on at the former's clinic in Vienna and Kuttner, of Breslau, reports 100 cases from his clinic.

The three series of cases give us data which seems very discouraging, but we must remember that they include cases operated on during the last ten years and that these years have been the period of development of cerebral surgery, also, that the experience gained from these cases taught the primary lessons of this branch of surgery.

The mortality among the cases mentioned seems prohibitive. Tooth states that the ultimate mortality at the National Hospital was 53.3%, and that the post-operative mortality was 32%. Von Eiselberg's post-operative mortality was 38%, and Kuttner's

45%. Taylor reports the post-operative mortality among 63 cases that he has observed as 30%. While these figures give a fairly accurate estimate of the mortality of the past the future promises a great improvement in results, which is already evident from the work of Cushing, who, with the advantage of the teachings of Horsley, Halstead and others, and with a very large previous experience in the treatment of brain tumors, has reduced his post-operative case mortality to 8.4%. At the Peter Bent Brigham Hospital, Boston, during the eighteen months ending last June, Cushing subjected 130 patients to 149 operations with 11 post-operative deaths, which result shows plainly the improvement dependent upon a better understanding of intracranial tumors and a technique adapted to the requirements of cerebral surgery.

The treatment of tumors of parts other than the brain has progressed to a point where the essentials are apparently well defined. We know that tumors of a certain type are benign and others malignant, and we are fairly well informed as to the course various tumors in different locations will follow. From the experience of many surgeons definite indications have been formulated for the eradication of tumors, but this knowledge has been of little assistance in solving the problem of the treatment of brain tumors as the brain differs so radically from other tissues in regard to function, structure, accessibility and response to surgical trauma. Tumors of the brain present a very different aspect than tumors of other tissues for not only must the character of the tumor, whether benign or malignant, be considered, but the effect of the mass in diminishing the intracranial space with the resulting increase of intracranial pressure and impairment of the circulation of blood and cerebrospinal fluid, and the effect of direct pressure of the growth and the increased intracranial pressure on the tracts, centers, and nerves, become factors of even greater importance. The problem is made more difficult because the experience of comparatively few men is available, and because of a lack of systematic study and classification of tumors, secondary changes, operative procedures and results, among cases already treated. Nevertheless, certain characteristics of various types of tumor are evident, and certain operative indications are established.

The most frequent form of intracranial neoplasm is the endothelioma. These tumors are most frequently found in the anterior portion of the upper cranial cavity, but may affect any portion of the brain. They arise from the meninges and are loosely attached to the membrane, sinus or falx at their point of origin, and do not infiltrate brain tissue but displace it by pressure, and form a bed from which they are usually easily removed. Endotheliomata are very vascular and friable. The blood supply is abundant and is derived from the vessels of the meninges which are engorged and dilated for some distance around the point of origin of the tumor. The vascularity of the growth and meninges often leads to a severe and sometimes uncontrollable hemorrhage during the removal of the tumor, and for this reason the mortality following removal is high. The prognosis, after successful removal, is better than of other forms of brain tumor because endotheliomata are relatively benign and do not tend to recur unless the bone has been involved. Tooth gives the ultimate mortality following removal of endotheliomata from the frontal region in 15 cases, as 47%, and from the central region in 9 cases, as 33%; the post-operative mortality for the 24 cases was 25%. Several deaths occurred after a period of some years of relief of intracranial pressure. The surviving 53% of the frontal cases, and 66% of the central cases were satisfactory, and are apparently free from further damage by the growth. Taylor cites six excisions of tumors of the dura—three died from hemorrhage within a few hours, one died of recurrence and two recovered and are well. Ultimate mortality, 66%; post-operative mortality, 50%; successful, 33%.

Gliomata are neoplasms arising in the brain substance from cells of the neuroglia, found in all portions of the brain, and are usually soft, infiltrating, and poorly defined. Gliomata are vascular and are subject to hemorrhages in their substance, and to degenerative changes—as a result they may become cystic. Periods of latency are common, during which time the growth of the tumor ceases and symptoms remain stationary or temporarily subside. Gliomata are found to respond to such disturbance as incision or partial removal, with increased rapidity of growth and malignancy, and it is doubtful if any soft, poorly defined tumor of the brain should be disturbed unless it is causing marked local symptoms. A decompression alone will probably relieve the symptoms and will give the patient as long a lease of life and comfort as the more radical procedure which excites increased activity on the part of the growth. Gliomata occasionally occur in a hard, more or less encapsulated or degenerated form, and are completely removable. Though the mortality following the removal of gliomata is low compared with that following the removal of endotheliomata, the ultimate mortality is much higher. Thirty-seven gliomata were removed from the forebrain at the National Hospital, and but four of the patients are known to be alive: thirty-three have died; five of sepsis, probably due to brain hernia, and twenty-two of a recurrence of the growth. The post-operative mortality was but 5.4%, but the ultimate mortality was 89.2%, and recovery occurred in but 10.8% of the cases. It must be emphasized that all the cases that eventually died must not be considered as failures, as many of the patients were relieved of distressing symptoms and were given a lease of life that was well worth while living. The average period of survival in these cases was 12.7 months, which compares favorably with the course of a large number of cases that were not operated on but at autopsy a glioma was found. With these, the time from the appearance of the first symptom until death was 10.1 months. Seven gliomata were removed from the cerebellum, with two recoveries.

Fibrous tumors, fibromata and fibrogliomata, though occasionally found in other parts, are the common tumor of the cerebellopontine recess where they arise as firm, pedunculated tumors from the sheaths of the cranial nerves. Like other fibrous tumors, they are benign, and when successfully removed, the patient's recovery is assured. Unfortunately, in this usual location they are not only inaccessible but they exert a gradually increasing pressure on the neighboring structures which include the important centers of the medulla. These structures accommodate themselves to the slow increase of pressure, but when the pressure is suddenly removed, through removal of the tumor, the blood vessels dilate and oedema and hemorrhage follow into these vital centers. The disastrous result is the effect on the respiratory center from which the patient dies of respiratory failure. Certain suggestions of Cushing may be a great factor in reducing the mortality from this cause. Thirty-six operations for cerebellar tumor were performed at the National Hospital with a mortality of 70.8%. Twenty-four operations were radical and twenty of the tumors removed were of this fibrous type. The result in the seven cases that survived was satisfactory.

Primary sarcoma of the meninges or brain is occasionally met. Meningeal sarcoma resembles an endothelioma in its effect on the brain during the early stage of its growth, but it later invades the brain tissue, and if removed is certain to recur. Sarcoma of the brain may grow for a time as an encapsulated growth and later break through the capsule and involve the brain itself. The prognosis depends on the stage at which it is attacked.

The less frequent forms of tumor are the myxomata, psammomata, osteomata, lipomata and teratomata, while nearly every form of tumor has been observed.

Metastatic carcinoma and sarcoma frequently affect the brain, but as they are a part of a general sarcomatosis or carcinomatosis, treatment is useless. Cysts occur in three forms. The simple, thin walled, traumatic cyst is usually susceptible to complete removal, or to partial removal of the wall and drainage. Sharp and Farrell have very recently called attention to the fact that, in a large proportion of cases of cerebral spastic paralysis, the cause was a hemorrhagic cyst resulting from injuries received during birth. They recommend that children so afflicted, who show ophthalmoscopic signs of increased intracranial pressure, be decompressed, or if possible, the cyst be evacuated or removed. They have operated on sixty-five cases with but six deaths and the results have been very gratifying. The spasticity has greatly diminished, the paralysis has improved, and the checked mental development has been allowed to proceed. Parasitic cysts, echinococcal and hydatid, are easily removed if accessible. Cysts resulting from hemorrhagic or degenerative changes in a tumor, may be removed or drained, and pressure relieved, but the prognosis is poor as cystic tumors are usually gliomatous.

Intracranial tumors arising from, or in the region of, the hypophysis present a rather complex problem. We cannot concern ourselves with the functional disorders of the hypophysis which are, in a measure, amenable to surgical treatment, as they form but a phase in the intricate interrelation of the functions of the organs of internal secretion. But, when hypertrophic changes in this gland—perhaps in response to perverted function on the part of some other organ—result in a mass that causes symptoms form distension of the sella, or from pressure exerted on structures in the neighborhood of the gland, or when a tumor in the region of the pituitary interferes with its function, the matter then comes within the scope of our discussion.

Cushing states that he is doubtful if the functional hyperplasia of the pituitary, which occurs in early acromegaly, should be attacked by partial removal of the gland if there are no neighborhood symptoms, as the process may become stationary or may pass over into the stage of glandular inactivity, hyperpituitarism passing on to hypopituitarism, which change is similar to that frequently occurring in the thyroid—hyperthyroidism passing into hypothroidism. Cushing also states that this sequence is even more common in the pituitary than in the thyroid. But, when the hyperplastic process distends the capsule of the hypophysis, and causes severe pituitary headache, or when it exerts pressure on the optic chiasm and threatens vision, then decompression, or partial removal of the gland is indicated. Many cases of hypopituitarism are due to tumors at the base of the brain that diminish the functional capacity of the gland by pressure upon it. Cushing states that in sixty-three cases in which these symptoms developed in adult life, the cause was presumed to be a supracellar tumor in thirty-four. The lesion was verified in seventeen cases. There were seven developmental cystic tumors, six developmental solid (mixed) tumors, three endotheliomata and one tuberculoma. Operation is indicated when there are neighborhood symptoms, whether there is evidence of endosecretory disturbance or not. Cushing found neighborhood symptoms present in 101 cases out of 148 regarded as primarily hypophyseal.

The most frequent form of intracranial mass is a granuloma, and while it is not a neoplasm, its effect is the same as that of a true tumor. Tuberculomata are usually multiple, and vary greatly in size and location. They are found most frequently in children, and the common site is in the cerebellar region. They can often be removed but the prognosis is poor as their disturbance is usually followed by a fatal tubercular meningitis. Syphilomata occur as gumma of the meninges and of the brain. The former often respond to antisyphilitic treatment, but the latter are very resistant and seldom improve. A syphiloma presents as a firm, fibrous encapsulated mass. It is usually superficial and is easily removed.

The operative treatment of a brain tumor consists either of a complete or partial removal of the mass, or of the formation of a defect in the bone and dura so as to allow more room for the contents of the cranial vault. The latter procedure is called a decompression.

There are certain requirements to be observed if the operative result is to be successful. The surgeon must be thoroughly trained in cerebral surgery and must be a master of all the various methods peculiar to this branch of surgery. He must be slow, deliberate and gentle and must be assisted by a staff accustomed to his methods. The anaesthetic must be given by one specially trained in the administration of these difficult, long anaesthesias. There can be no hurry, as it is often necessary to wait for some time for oozing of blood to stop before the operation can proceed. Cushing says " there should be a legal penalty imposed for ' speeding ' in brain surgery." The operation should be performed in a hospital completely equipped to meet every emergency. There should be an apparatus ready for artificial respiration, and a donor to furnish blood for a transfusion in case loss of blood has been excessive, wounds must be left dry, and closed without drainage. If the patient is in critical condition he must be left on the operating table for hours before removal to a bed is possible.

Intracranial tumors group themselves according to their site, and the requirements of treatment. Supratentoral tumors are those of the cerebrum and those arising from the meninges of the upper cranial cavity. Access to these tumors is best gained by means of a large osteoplastic flap over the region in which the tumor has been localized. This gives the large exposure that is necessary for manipulation of the tumor, for the control of the hemorrhage and also allows the dural flap to be made sufficiently smaller than the bone flap, so when replaced, it can be accurately sutured. Careful suture of the dura combined with reposition of the whole osteoplastic flap, including the bone, overcomes the possibility of cerebral hernia. A tumor of the dura is removed by excision of the portion of the dura from which it springs, and when the base is free the tumor usually can be lifted from its bed in the brain tissue, though great care must be taken to control hemorrhage from the dural vessels. A cortical growth that is definitely encapsulated can be enucleated by slow, careful, blunt dissection with blunt instruments, or by pushing the tissue aside with bits of cotton. The hemorrhage can usually be controlled by bits of moist cotton or by the application of pieces of muscle, or fascia, to the bleeding point. The cavity should be thoroughly dry before the wound is closed. A subcortical growth can sometimes be reached and enucleated through an incision in the cortex. A case has been reported where a subcortical tumor has been extruded from the brain, and has forced its way through the incision in the scalp, after a decompression had been done over the site of the tumor. This will not be the method of choice in dealing with this class of tumors as sepsis is inevitable, nevertheless, some way may be found to take advantage of the tendency of subcortical tumors to extrude when the restraining tissue over them is removed. The principle is identical with that employed by Ellsberg for the removal of tumors of the spinal cord. The operation is not complete unless the increased intracranial pressure has been lowered, and if the tumor has not been removed this is best done by a decompression beneath the temporal muscle. When the base of the osteoplastic flap is in the temporal region, it is often possible to cut the bone of the temporal region away below the base of the flap. If this cannot be done, a separate incision must be made above the zygoma; the temporal muscle split in the direction of its fibers and retracted; the bone perforated and removed by a rongeur, and the dura incised, using care to avoid the middle meningeal artery. Three or four square inches of bone should be removed, and the temporal muscle and the skin should be carefully sutured without drainage. A single decompression may not lower intracranial pressure sufficiently to allow the osteoplastic flap to be replaced, and in that case a second decompression on the other side may be necessary or spinal puncture may be done to remove a portion of the cerebro-spinal fluid. Some operators advocate tapping the lateral ventricle instead. The old method of removing the bone from the osteoplastic flap should be abandoned as it is not more efficient than subtemporal decompression, and it invites the formation of a brain hernia. The cortex cannot be left without some support other than the structures of the scalp. In the temporal region this support is supplied by the temporal muscle, and apponeurosis which give sufficiently to allow the proper expansion.

Subtentoral tumors are those of the cerebellum and of the cerebello-pontine recess. Exposure of the cerebellar region should be made by an incision from mastoid to mastoid just above the superior curved line of the occipital bone and by a medial incision downward from the center of the transverse incision. Hemorrhage is very troublesome and must be carefully controlled. The flaps should be reflected outward, and exposure must include the posterior margin of the foramen magnum. The thin bone of the cerebellar fossa is perforated and completely removed with a rongeur on each side of the skull. There remains the dense bridge of bone extending from the external occipital protuberance to the foramen magnum. The occipital sinus is separated from the under surface of this bridge, and the bridge removed with a Gigli saw. The sinus can then be ligated and severed so as to allow either lobe of the cerebellum to be displaced toward the opposite side. The wide exposure prevents excessive bulging of the cerebellum when the dura is incised, and the lateral displacement of the cerebellum gives much better access to the cerebello-pontine angle. In case the tumor cannot be removed, this procedure results in the best form of decompression for this region. The dura need not be closed and preservation of the bone is not essential as the thick muscles of the neck afford sufficient support. The muscles must be carefully sutured by layers, as primary union is essential. The mortality following cerebellar operations has been very high. Cushing states that the mortality in seventy-seven cases, subjected to all kinds of cerebellar operations at the foreign clinics, was 72.8%. He has so modified his procedure for attack on this region that he has reduced his mortality to 13%. His method is best given in his own words, "The direction of this modification lies, I think, in performing these suboccipital operations with a bilateral exposure, and in one instead of two stages; in carrying through the elaborate approach to the lesion with complete haemostasis, even though it means two hours' labor; in lowering tension by an occipital puncture of the lateral cerebral ventricle; in removing the posterior half of the foramen magnum, and possibly, in case of great cerebellar herniation through the foramen, the arch of the atlas as well; in being content, in view of the obvious impossibility of total enucleation of the growth, entangled as it is in the vessels and nerves of the lateral recess, with the mere splitting of the comparatively non-vascular lesion with subsequent scooping out, on each side, of as much tumor tissue as possible, leaving its capsule in place, in accurate suture of the wound in layers without drainage; in leaving the patient in the face down position on the table if necessary for hours, should there be the least question of threatened respiratory difficulty; in the willingness to give an entire morning of at least three hours to such an undertaking."

Hypophyseal tumors have been attacked in a number of ways —some operators advocate approach through the frontal or temporal regions, but Cushing, who has had the greatest experience in this work, has adopted the transphenoidal route as the most practical in the large majority of cases as it not only allows sufficient glandular tissue to be removed, but also direct decompression to be done. The procedure consists of separating the upper lip from its attachment to the superior maxilla, elevating the lip and nose so as to expose the cartilaginous septum, the mucous membrane is stripped from each side of the septum, and the cartilaginous and bony septum is removed. The opening between the walls of the septum is then dilated with special dilating plugs which enlarge the opening by compressing the turbinates, a narrow speculum is introduced, and the bulging anterior wall of the sphenoidal sinus is exposed. The character of the hypophysis and sphenoidal sinus as regards shape, size and location, must be determined, previous to the operation by radiographic methods, and with this data in mind, the proper incision is made and the anterior wall of the sinus removed. In simple cases this exposes the enlarged pituitary covered only with a few scales of bone from the thin anterior wall of the fossa, dura, and mucous membrane. As much of the soft, hypertrophied pituitary as is necessary is then scooped out and pressure applied until all bleeding stops. The wound must be left absolutely dry as no drainage is used. The speculum is removed, the sublabial incision closed, and a cigarette drain placed in each nostril to keep the layers of mucous membrane in contact. A supracellar tumor cannot be removed by this method in every case, as the flattened pituitary may intervene, but the relief afforded by a sellar decompression is usually of great value in these cases. Tumors in this region, either of the pituitary itself or supracellar tumors, often extend into the cranial cavity and cause a general increase of intracranial pressure which must be relieved by a subtemporal decompression.

Cushing has performed 125 operations on 114 patients for the relief of pituitary disorders, with ten deaths—a mortality of 10.5%. Subtemporal decompression was done on thirty-three cases and in four instances both sides were decompressed. There were two deaths, twenty of the remaining thirty-one patients were relieved of pressure symptoms, and in a few cases vision was improved. Eleven cases were not helped by the decompression.

A subfrontal or subtemporal attempt was made on the pituitary in thirteen cases. Cushing has not found either of these methods satisfactory. He has performed seventy-four transphenoidal operations on sixty-eight patients: five cases were operated on twice, and one a third time because of continued enlargement of the growth, with a return of chiasmal symptoms. A simple sellar decompression was done on sixteen of these cases, and a sellar decompression combined with the removal of tissue, or the evacuation of a cyst, was done fifty-eight times on fifty-two patients. There were seven deaths from the seventy-four transphenoidal operations—mortality 9.5%. Most of these operations were undertaken for the relief of chiasmal symptoms. Progressively failing vision remained stationary, or improved, in twenty-two instances, and there was a prompt widening of the visual fields and marked improvement of vision in twenty-two other cases. Vision had been completely lost before operation, in five cases, but in two of these it was partially restored. Eight cases were not improved and their condition remains unchanged. Progressive failure of vision continued after operation in three cases but the tissue removed showed malignant change of the lesion from which the patients have since died.

Inaccessible tumors can be treated only by decompression which may give relief for a time if important tracts or centers are not involved, and if the circulation of the cerebro-spinal fluid is not obstructed.

Cases, presenting signs of increased intracranial pressure due to a tumor which gives no localizing signs, should be decompressed. This class of cases gives the best results after decompression, as important tracts and centers are not involved. The relief is often of long duration and later localizing signs may appear, and an attempt may be made to remove the tumor.

The important factor in the successful treatment of cases of tumor of the brain is the early diagnosis and early operation. If an operation is to be done at all, it should be performed before increased intracranial pressure has caused damage which no operation can rectify, for it is not justifiable to prolong life unless life is to be worth living. The positive indications for operation are increasing swelling of the optic disc, optic neuritis, with diminution of visual acuity, unbearable headache, increasing frequency or severity of convulsions, extending paralysis, or pronounced mental changes.

There is always a probability of improvement following an operation for brain tumor, whether the tumor is removed or not. Cushing says, "This, indeed, is more than can be said of most purely exploratory operations performed for new growths involving the abdominal organs, for at the best the closure of a laparotomy wound in the face of an inoperable lesion, leaves the patient's condition unaltered, whereas a properly performed craniectomy is in itself often beneficial.

The present status of the treatment of brain tumors can best be summed up as follows: Cerebral surgery is emerging from the same period of discouraging uncertainty which forms a chapter in the history of abdominal, pelvic, and genito-urinary surgery that is not pleasant to recall in the light of our present knowledge. The chapter deals with the poor results and high mortality dependent on working in ignorance of the fundamental principles. Many mistakes in the past in cerebral surgery are now recognized and can be avoided in the future, many erroneous ideas have been dispelled, and the many limitations of this branch of surgery are recognized and can be respected. The improved results which are sure to come in the future will be in a great measure due to early diagnosis and early operation, and to strictly limiting the operation to a properly performed decompression in that class of cases which are now recognized on exposure, as irremovable tumors.

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Editorial

> We are just at the turning point, at the end of the century, fatigued and exhausted with the appalling accumulation of knowledge which it has set moving. And it is the eternal need for falsehood, the eternal need for illusion which distracts humanity, and throws it back upon the delusive charm of the unknown. Since we can never know all, what is the use of trying to know more than we know already? Since the truth, when we have attained it, does not confer immediate and certain happiness, why not be satisfied with ignorance, the darkened cradle in which humanity slept the deep sleep of infancy? Yes, this is the aggressive return of the mysterious, it is the reaction against a century of experimental research. And this had to be; desertions had to be expected, since every need could not be satisfied at once. But this is only a halt; the onward march will continue, up there, beyond our view, in the illimitable fields of space.
>
> *Doctor Pascal* EMILE ZOLA.

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Dean Ordway. The appointment of Dr. Thomas Ordway as Dean of the Albany Medical College is the first step in the reorganization of the College, made necessary by the changes in the standards and methods of medical education. The traditions of the School in maintaining an advanced standing are again preserved by this last action of the

Board of Trustees, one of the most difficult and most public spirited acts they have ever been called upon to perform. For the first time since its organization the College stands in need of public support, and the Board has generously underwritten a financial obligation rather than lose to Albany one of its most honored institutions.

The assumption of this burden demands closer scrutiny on the part of the Trustees than has heretofore been necessary. Of the long line of eminent men who have presided over the meetings of the Faculty Dr. Ordway is the first to receive his appointment directly from the Board, as their representative and executive officer. His predecessors have been chosen by the Faculty from their own number, as a mark of distinction and seniority. Dr. Alden March, the founder of the College, was President of the Faculty from 1839 until his death in 1869. He was succeeded by Dr. James McNaughton, who held the office until 1874. Dr. James H. Armsby, the first professor of anatomy, and also for many years curator of the Museum, held the office in 1874. Upon the death of Dr. Armsby, Dr. Thomas Hun became Dean in 1875. Dr. Hun was then Emeritus Professor of the Institutes of Medicine. Upon his death in 1896, Dr. Albert Vander Veer was elected Dean, and resigned the office in 1903, as incompatible with his membership in the State Board of Regents. He was followed by Dr. Samuel B. Ward, who resigned in 1913, on account of poor health. Dr. Willis G. Tucker accepted provisionally the title of Acting Dean in 1913, and of Dean in 1914, and has recently retired in favor of Dr. Ordway. The connection of Dr. Tucker with the College has been exceptional. Covering a half-century, it has been more intimate than that of any other man. His name first appears in the list of students in the catalogue of 1867-68; and later as a member of the Faculty, from 1874 to the present time. In 1883 he became Registrar, and continued the administrative officer until he accepted promotion to be Dean. His marvellous recollection of faces and names is always in evidence on alumni day, when his prompt recognition of returning graduates and cordial greetings have long been a feature of the reunions.

Dr. Ordway is exceptionally qualified for the responsibilities he now assumes. He graduated from Harvard University in

1900, and for certain biological and chemical work received the degree of Master of Arts in 1901. He graduated in medicine from the Harvard Medical School in 1905, and was then made assistant to Dr. F. B. Mallory of the Boston City Hospital, completing two years of service as interne in 1907. He was also assistant in pathology to Dr. W. T. Councilman. In 1909 Dr. Ordway was appointed Director of the Bender Hygienic Laboratory, succeeding Dr. George Blumer and Dr. Richard Mills Pearce, who had already established the laboratory upon a high scientific plane. Dr. Ordway sustained the reputation made by his predecessors, and was particularly happy in the administrative part of his work. In November, 1911, he left Albany to accept the appointment of Physician-in-Charge of the Huntington Hospital of the Cancer Commission of Harvard University and was made Lecturer in Pathology in the Graduate School of Medicine. In 1913 he became Instructor in Medicine and a member of the Faculty of the Harvard Medical School, and by special appointment of Harvard University was sent to London, Paris and some of the German cities to investigate the clinical status of radium. The regret felt by Dr. Ordway's many professional friends when he left Albany is now relieved by his return, and the personal relations he established here four years ago bespeak for him a cordial reception and heartiest co-operation.

* * *

The Medical Department of Union University.

The resounding title under which the College has prospered for forty years is now to become an established fact rather than a "scrap of paper." Expert study of medical schools during the last few years has raised the vital question as to whether such institutions may be properly conducted without liberal endowment and university affiliation. In a spirit of good faith, and looking to the co-operation of the Rockefeller and Carnegie Foundations, the Trustees of the College have taken the first step toward closer association with Union University. The organic act of 1874 is a permissive statute, establishing only a name and restricting the Governors of the University in their control of the Medical Department. Steps to assure an impartial supervising body were taken by the Board of Trustees on April thirteenth, by the election of four governors of Union University to membership. These new members, all residing in New York, are the Reverend Dr. George Alexander, long a professor in Union College, and at one time its *ad interim* president; Dr. Edgar S. Barney, principal of the Hebrew Technical Institute of New York; Professor Franklin H. Giddings of Columbia University, and Courtland V. Anable, Esq., one time tutor of mathematics at Union, and now a practicing attorney in New York. The Board was further strengthened by the addition of Mr. James C. Farrell of Albany, leaving one vacancy to be filled.

The Executive Committee of the Trustees of the Albany Medical College now consists of: Hon. Simon W. Rosendale, President of the Board of Governors of Union University; Hon. Alden Chester, a member of the same Board; Mr. Robert Olcott, Treasurer of the Albany Medical College funds; Mr. Luther H. Tucker, Secretary of the Board of Trustees; Hon. Amasa J. Parker, Vice-President of the Board of Governors of the University; Mr. Edmund N. Huyck, Mr. Charles Gibson, Hon. James B. McEwan, Reverend Dr. Alexander, Dr. Barney, Mr. Anable, Professor Giddings and Chancellor Richmond.

An organization has thus been effected to perfect the alliance between the medical school and other departments of the University. Under the technical direction of Dean Ordway, a bright future may be anticipated and full development attained of the cortical and clinical resources of a city long known as one of the progressive medical centres of the country.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.
ABSTRACT OF VITAL STATISTICS, MARCH, 1915.
COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

Deaths.

Consumption	21
Typhoid fever	2
Scarlet fever	0
Measles	0
Whooping cough	3
Diphtheria and croup	0

Grippe	12
Diarrheal diseases	1
Pneumonia	30
Broncho-pneumonia	6
Bright's disease	27
Apoplexy	9
Cancer	14
Accidents and violence	10
Deaths under one year	25
Deaths over 70 years	58
Total deaths	218
Death rate	23.32
Death rate less non-residents	19.90

Deaths in Institutions.

	Resident	Non-Resident
Albany Hospital	8	12
Child's Hospital	1	0
County House	5	4
Home for the Friendless	0	1
Homeopathic Hospital	1	10
Hospital for the Incurables	0	1
Little Sisters of the Poor	1	1
Public places	2	3
Sacred Heart Convent	0	1
St. Margaret's House	4	0
St. Peter's Hospital	4	7
Maternity Hospital	1	2
Federation of Labor Pavilion	2	0
Albany Hospital Camp	2	2
	31	44

Births	205
Still births	9

TUBERCULOSIS.

Bender Laboratory Report on Tuberculosis.

Positive		14
Negative		55
Total		69
Living cases on record March 1, 1915		386
Cases reported:		
By card	30	
Dead cases by certificate	4	
		34
Total		420

Dead cases previously reported	17	
Dead cases not previously reported	4	
Duplicates	2	
Removed	1	
		24
Living cases on record April 1		396
Total tuberculosis death certificates filed during March		21
Non-resident deaths:		
City at large	1	
C. F. L. Pavilion	2	
Albany Hospital Camp	2	
		5
Resident deaths		16

Report of Visiting Tuberculosis Nurse.

Old cases	6
New cases	25
Returned from hospitals	3
Total	34
Disposition of cases:	
Died	4
Sent to hospitals	11
To general tuberculosis nurse	13
Left town	1
Remaining under treatment	5
Total	34
Visits made	30
Visits made, old cases	198
Calls at Board of Health Office	25

BUREAU OF CONTAGIOUS DISEASE.

Cases Reported During March, 1915.

Typhoid fever	5
Scarlet fever	30
Diphtheria and croup	11
Chickenpox	20
Measles	12
Whooping-cough	33
Tuberculosis	34
Total	145

Communicable Disease in Relation to Schools.

	Reported		
	D.	S.F.	M.
Public School No. 1	..	1	..
Public School No. 6	1	..	..
Public School No. 7	..	2	..
Public School No. 9	..	1	..
Public School No. 10	1	..	..
Public School No. 11	..	2	..
Public School No. 12	1	..	..
Public School No. 14	1	2	..
Public School No. 15	..	1	1
Public School No. 17	..	1	..
Public School No. 18	1	..	..
Public School No. 21	..	1	..
Cathedral School	..	..	1

Number of days quarantine for diphtheria:
Longest...... 23 Shortest...... 12 Average...... 18 2/6
Number of days quarantine for scarlet fever:
Longest...... 54 Shortest...... 30 Average...... 34 1/5
Fumigations:
Houses.................... 71 Rooms.................. 329

Cases of diphtheria reported	11
Cases of diphtheria, antitoxin used	10
Cases of diphtheria, antitoxin not used	1
Deaths after use of antitoxin	0

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria.

Initial positive	16
Initial negative	215
Release positive	13
Release negative	68
Suspicious	2
No growth	1
Total	315

Test of Sputum for Tuberculosis.

Positive	14
Negative	55
Total	69

Widal tests:	
Positive	5
Negative	27
Suspicious	4
Unsatisfactory	3
Total	39
Milk analyses	32
Water analyses	1
Wasserman reactions	4

BUREAU OF MARKETS AND MILK.

Public market inspections	24
Market inspections	171
Fish market inspections	10
Packing house inspections	3
Rendering plant inspections	2
Slaughter house inspections	4
Hide house inspections	3
Milk depots inspected	14
Milk depots deficient	2
Milk wagons inspected	35
Milk wagons unclean	2
Milk cans inspected	144
Milk cans unclean	12
Milk cans condemned	3
Dairies inspected	5
Cows re-examined	195
Lactometer tests	32
Temperature tests	32
Fat tests	54
Fat tests below standard	5
Sediment tests	12
Chemical tests	4
Bacterial examinations	32
Slaughter house deinfected	1
Special inspection, measles	3

MISCELLANEOUS.

Work certificates issued to children	16
Number of complaints of nuisances	62
Privy vaults	3
Closets	1
Plumbing	10
Other miscellaneous complaints	48
Number of dead animals removed	592
Cases assigned to health physicians	71
Calls made	192

Medical News

Edited by Arthur J. Bedell, M. D.

ALBANY GUILD FOR THE CARE OF THE SICK.—DEPARTMENT OF VISITING NURSING.—STATISTICS FOR MARCH, 1915.—Number of new cases, 208; classified as follows: Dispensary patients receiving home care, 26; district cases reported by health physicians, 2; charity cases reported by other physicians, 61; moderate income patients, 87; metropolitan patients, 32; old cases still under treatment, 531; total number of cases under nursing care during month, 739. Classification of diseases for the new cases: Medical, 31; surgical, 9; gynecological, 4; obstetrical under professional care, mothers 50, infants 50; eye and ear, 1; skin, 1; infectious diseases in the medical list, 62. Disposition: Removed to hospitals, 13; deaths, 38; discharged cured, 116; improved, 25; unimproved, 4; number of patients still remaining under care, 543.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 2; students in attendance, 4; nurses in attendance, 3; patients carried over from last month, 1; new patients during month, 5; patients discharged, 5; visits by attending obstetrician, 5; by students, 50; by nurses, 54; total number of visits for this department, 109.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 1,378; for professional supervision of convalescents, 669; total number of visits, 2,047; pay cases, 769; charit ycases, 609; unrecorded cases, 669; cases reported to the Guild by 2 health physicians, and 45 other physicians; graduate nurses 8, certified nurses 1 pupil nurses 7 on duty.

Dispensary Report.—Number of clinics held, 77; new patients, 166; old patients, 488; total number of patients treated during month, 654. Classification of clinics held: Surgical, 12; nose and throat, 7; eye and ear, 13; skin and genito-urinary, 6; medical, 7; lung, 8; dental, 0; nervous, 2; stomach, 3; children, 9; gynecological, 8.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY.—The regular monthly meeting of the Medical Society of the County of Albany was held at the Elks Club, Thursday evening, April 22, 1915, at 8.30 P. M. The following program was presented: Dr. F. C. Conway presents cases of: Bilateral athetosis; Multiple Sclerosis, Erb's Spinal Paralysis, Cerebellar (peduncular) lesion; Dr. J. P. O'Brien and Dr. A. J. Bedell, "Exhibition of a cured case of pulsating exophthalmos;" Dr. A. J. Bedell, "Substitutes for simple enucleation—demonstration;" Dr. E. Kellert, presentation of pathological specimens: I, Megacolon; II, Experimental tuberculosis of a guinea pig; III, Aortic aneurysm; IV, Lesions of foot and mouth disease; Dr. E. L. Draper, "Report of a case of aberrant thyroid;" Dr. J. N. Vander Veer, lantern slide exhibition of cystoscopic pictures.

MEDICAL SOCIETY OF THE COUNTY OF SCHENECTADY.—The regular meeting of the Medical Society of the County of Schenectady was held in the rooms of the Society in the New County Building on Tuesday evening, April 13, 1915, at 8.30 P. M. Scientific program: "Alveolar Infection," Dr. D. R. Kathan, discussion led by Dr. Paul Mair, D. D. S.; "A Clinical Study of Cardiac Neuroses," Dr. N. A. Pashayan, discussion led by Dr. L. Betts; "Post-operative treatment in Surgical Cases," Dr. J. H. Collins, discussion led by Dr. W. P. Faust; "The Treatment of Uterine Fibroids with X-rays," Dr. C. B. Witter.

PAN-AMERICAN CONGRESS TO MEET.—The seventh Pan-American Congress will meet in San Francisco, June 17 to 21, inclusive. It assembles pursuant to invitation of the president of the United States issued in accordance with an act of Congress approved March 3, 1915.

The countries and colonies embraced in the Congress are the Argentine Republic, Bolivia, Brazil, Canada, Colombia, Cuba, Chili, Costa Rica, El Salvador, Ecuador, Guatemala, Honduras, Haiti, Hawaii, Mexico, Martinique, Nicaragua, Panama, Paraguay, Peru, Santo Domingo, United States, Uruguay, Venezuela, British Guiana, Dutch Guiana, French Guiana, Jamaica, Barbadoes, St. Thomas and St. Vincent. The organization of the Congress is perfected in these countries and the majority of them have signified their intention to be represented by duly acredited delegates. The Congress will meet in seven sections: (1), Medicine; (2), Surgery; (3), Obstetrics and Gynecology; (4), Anatomy, Physiology, Pathology and Bacteriology; (5), Tropical Medicine and General Sanitation; (6), Laryngology, Rhinology and Otology; (7), Medical Literature.

All members of the organized medical profession of the constituent countries are eligible and are invited to become members. The membership fee is $5 and entitles the holder to a complete set of the transactions. Advance registration are solicited and should be sent with membership fee to the treasurer, Dr. Henry P. Newman, Timken Building, San Diego, Cal. The Palace Hotel will be headquarters. The first Pan-American Medical Congress was most successfully held in the United States in 1893.

ANNUAL REPORT OF STATE HEALTH DEPARTMENT.—Dr. Herman M. Biggs, State Commissioner of Health, has transmitted the thirty-fifth annual report of the State Department of Health to Governor Whitman. The report is mainly occupied in pointing out that the department has set for itself the task of saving 25,000 lives during the next five years, that 10,000 lives might be saved annually and that 100,000 cases of serious illness could be prevented together with all the economic loss involved (some $30,000,000). Dr. Biggs proposes to initiate a campaign of education for the purpose of reducing the death rate among those over 45 years of age due to diseases of the blood vessels, heart, kidneys and brain. In closing his letter Dr. Biggs says that it remains for the legislature and the executive to decide how far the citizens of the State shall have the benefits in prolonged and effective life which science and experience can give them.

Oversupply of Hospital Trains in Germany.—A Berlin exchange announces that hospital trains have been equipped by various organizations, municipalities, and private beneficence, now number over 150 and far exceed the demand. Some of these trains stand unused on the sidings for weeks at a time and hence the Red Cross calls a halt on further donations of the kind saying that the capital could be used to better advantage.

Widows' Pensions.—The New York Legislature has passed the Widow's Pension Bill granting "allowances" not to exceed the amount or amounts it would be necessary to pay to an institutional home for the care of the widow's children. They must be suitable to bring up their children, must have been residents of the county two years preceding the application for allowance and their husbands must have been citizens of the United States and residents of the State before death. The law contains a provision not found in laws in other states "that if such aid is not granted the child or children must be cared for in an institutional home." This, if strictly interpreted would restrict the number eligible for allowances. The administration of the law is placed in the hands of the local board of child welfare in each county.

Saratoga Springs Medical Society.—The regular meeting of the Saratoga Springs Medical Society was held at Newman's Lake House, at 9 p. m., Friday, April 23rd. The following papers were read: "Congress Spring and the hydraulics of the mineral water reservoir," Dr. A. W. Ferris; "Organo-Therapy," Dr. D. C. Moriarta.

A Law Against Division of Fees.—The Kansas Senate has passed unanimously a bill prohibiting surgeons paying commissions to physicians who may send patients to them, or advise patients to go to them for treatment or operations. However, the bill specifically states that it shall not be unlawful for the attending physician to receive a fee from the surgeon or specialist for services actually performed in case the patient is informed in advance as to the amount of fee which the physician is to receive.

A Proposed Amendment to the Massachusetts Medical Law.—The Massachusetts State Board of Registration in Medicine has requested the legislature to amend the registration law so that hereafter all applicants for examination shall hold the degree of M. D. conferred by a legally chartered medical school. All but three states in the Union demand a degree in medicine as a prerequisite to examination but Massachusetts allows anyone to take the examination if of good moral character, 21 years of age and willing to pay the fee of $20.

UNITED STATES TO TAKE CHARGE OF QUARANTINE IN NEW YORK CITY.—After attempts for twenty-five years by the Academy of Medicine and other bodies to have the United States take charge of the quarantine station at New York, it is now announced that the Public Health Service will soon assume control of the plant at Quarantine.

BOYLAN LAW STRENGTHENED.—At the conference between delegations interested in the drug crusade in New York City and representatives of the State Board of Pharmacy and the State Pharmaceutical Society a compromise anti-drug bill was agreed upon which will strengthen the Boylan law. Under the new bill, which is called the Bloch bill, a druggist can refill a prescription containing a habit forming drug only for the person for whom it was originally compounded. Physicians must make a physical examination of a patient before giving him a drug cure. A bill to prevent the use of habit forming drugs in patent medicines will be urged next year by Howard Clark Barber, superintendent of the Society for the Prevention of Crime.

ROCKEFELLER INSTITUTE FOR THE STUDY OF ANIMAL DISEASES.—The establishment of an institution for scientific research in animal diseases has been made possible by the signing of a bill recently passed by the New Jersey Legislature. The institution will be located near Princeton conducted by the Rockefeller Institute and under the charge of Dr. Theobald Smith (A. M. C. '83).

THE CORONER SYSTEM OF NEW YORK CITY ABOLISHED.—A bill abolishing the office of coroner in New York City has been signed by Governor Whitman and the mayor of the city is to appoint a chief medical examiner who in turn appoints two assistants to perform the work formerly done by the coroners. The new law goes into effect when the terms of the present coroners expire. Eleven coroners and the same number of coroners' physician are affected by this change.

SURGEON GENERAL GORGAS.—Surgeon General Gorgas has been offered by the trustees of the Rockefeller Foundation the position of advisor in problems of public health. If he accepts he will be obliged to retire from the army, though not necessarily to resign, unless he is sent to Siberia, in which, being belligerent territory, he would probably be unable to work even in the saving of life while a retired army officer.

PERSONALS.—Dr. JAMES N. VANDER VEER (A. M. C. '03), Albany, has been elected a member of the American Urological Society at its recent meeting.

—Dr. JOHN P. FABER (A. M. C. '05), Schenectady, N. Y., was reelected president of the Schenectady Committee on the Prevention of Tuberculosis of the State Charities' Aid Association at its meeting, March 5, 1915.

—Dr. George W. Papen (A. M. C. '05), Albany, has removed from 268 to 349A Madison Ave., Albany, N. Y.

—Dr. Nelson K. Fromm (A. M. C. '08), Albany, has removed to 216 State St.

—Dr. John Waluk (A. M. C. '14), is engaged in active practice at 69 S. Third Ave., Brooklyn, N. Y.

Married.—Dr. Ralph B. Post (A. M. C. '11), Ravena, N. Y., and Miss Frances G. Gray, were married at Albany, N. Y., April 21, 1915.

—Dr. Burke Diefendorf (A. M. C. '13), Hillsdale, N. Y., and Miss Bertha A. Mann were married at Troy, N. Y., April 20, 1915.

Died.—Dr. John L. Perry (A. M. C. '62), widely known as one of the proprietors of the United States Hotel at Saratoga Springs, died at Baltimore, Md., April 13, 1915, aged 75.

—Dr. Albert S. Newcomb (A. M. C. '66), a member of the New York Academy of Medicine, formerly medical examiner for the New York Postoffice and local surgeon for the West Shore Railroad; for a time surgeon of the Twenty-fourth Infantry, N. G. N. Y., died at his home in Schenectady, March 1, 1915, from heart disease, aged 73.

—Dr. Edwin Crocker (A. M. C. '68), a member of the Medical Society of the State of New York and a practitioner and druggist of Narrowsburg, N. Y., died at his home, March 26, 1915, aged 75.

—Dr. Orris E. Herrick (A. M. C. '71), a Fellow of the American Medical Association and president of the Grand Rapids Academy of Medicine, for many years consulting gynecologist to St. Mark's and the Union Benevolent Association hospitals, Grand Rapids, a member of the Michigan State Board of Health in 1885, professor of gynecology in Cincinnati Medical College in 1878 and editor of the *Obstetric Gazette*, died in the DeVore Sanatorium, Grand Rapids, March 5, 1915, from cerebral hemorrhage, aged 66.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

A Text-Book of Diseases of the Nose and Throat. By D. Braden Kyle, A. M., M. D., Professor of Laryngology and Rhinology, Jefferson Medical College, Philadelphia. Fifth edition, Thoroughly revised and enlarged. Octavo of 856 pages with 272 illustrations, 27 of them in colors. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, $4.50 net.

In the fifth edition of his well known book, the author has followed the same general plan. The following new articles have been added: Vaccine Therapy; Lactic Bacteriotherapy in Atrophic Rhinitis; Salvarsan in the Treatment of Syphilis of the Upper Respiratory Tract; Sphenopalatine Ganglia Neuralgia; Negative Air-pressure in Accessory Sinus Disease; Chronic Hyperplastic Ethmoiditis; Congenital Insufficiency of the Palate; Lactic Bacteriotherapy in Pharyngeal Affections; and an article describing the Removal of a Plate of Artificial Teeth from the Esophagus. Under diagnosis, pathology and treatment, all systemic conditions in their relation to the special diseases of the nose and throat, have been thoroughly considered.

While the book is perhaps rather advanced for students, it is up to date and a good reference book for physicians.

C. F. T.

Medical Electricity and Rontgen Rays and Radium. By SINCLAIR TOUSEY, A. M., M. D., Consulting Surgeon to St. Bartholomew's Clinic, New York City. Second edition, thoroughly revised and enlarged Octavo of 1,219 pages, with 798 practical illustrations, 16 in colors. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, $7.50 net; half morocco, $9 net.

In this, the second edition of Dr. Tousey's work, over 100 pages of new matter have been added, and fifty new illustrations. The book now contains over 1,200 pages, 600 of which are devoted to the subject of electricity, 475 to the rontgen ray, about fifty to radium and thirty to phototherapy.

It is impossible for a reviewer to read and digest such a mass of information. Quotations from the publishers are as follows: " Such new matter as diathermy, sinusoidal currents, radiography with intensifying screens, rontgenotherapy, the Coolidge and similar rontgen tubes, Tousey's own dosage, and radium therapy. Machado's tabular classifications of electric methods, effects and uses have also been included—every advance in the use of these modern therapeutic agents."—" Dr. Tousey's work is complete."—" Nothing is taken for granted; every detail is explained from reading the radiogram down to the formula of the soldering compound used in making wire connections."

Altogether, the book is a monumental work of " Detail "—a valuable addition to the library of the specialist or expert. J. M. B.

MEDICINE

Edited by Samuel B. Ward, M. D., and Charles K. Winne, Jr., M. D.

A Clinical Consideration of Hodgkin's Disease.

J. L. YATES. *Bulletin of The Johns Hopkins Hospital, June,* 1914, *Vol. XXV, No.* 280, *Page* 180.

Yates, like Bunting, believes that Hodgkin's disease may be considered an infectious, non-contagious affection due to the Bacterium Hodgkini. It is characterized by a somewhat variable, though definite, reaction in the lymphatic and perilymphatic structures, specific changes in the blood picture and by the manifestation of little or no tendency to spontaneous recovery.

It appears to the author that these cases clearly indicate that primarily Hodgkin's disease is a localized process, susceptible of cure when properly treated as a malign, though chronic infection. It may persist for years without manifesting itself save in the blood picture so that cures may not be assumed until after an uninterrupted duration of years of persistently normal conditions.

A sovereign remedy for all cases is not now conceivable. At present the greatest need is some therapeutic agency to control glands not directly accessible; for once extension, which may occur early, has reached either the thorax or abdomen the prognosis becomes relatively, if not absolutely hopeless.

Does the Internal Administration of Potassium Iodide Have any Effect on Thyroid Grafts in Guinea Pigs?

CARROLL SMITH. *The Journal of Medical Research, May* 1914, *Vol. XXX, No.* 2, *Page* 113.

The relation of iodine in its various forms to the changes in thyroid tissue has been investigated by Marine in conjunction with Lenhart and Williams. They made a very thorough study of the histology of normal and goitrous thyroids and observed the effect of iodine on the glands. These authors worked especially on dogs and came to the following conclusions: They divide thyroid glands into normal, colloid, and hyperplastic glands. When the iodine intake is lessened they show that the thyroid tends to undergo hyperplasia. They maintain that iodine given to an animal with a hyperplastic gland causes the structure to become a colloid gland within two or three weeks.

Marine claims that a colloid gland is that form of thyroid most nearly related to the normal gland to which a hyperplastic gland can revert. He states that there seems to be a minimum amount of iodine necessary to maintain a normal gland structure, and when the amount falls below this minimum, hyperplasia begins. There is a progressive decrease in the iodine content in the thyroid from normal glands through the various stages of hyperplasia. In other words, the amount of iodine and the degree of thyroid hyperplasia vary inversely in relation to each other. The author further claims that thyroid hyperplasia is a physiological reaction to the needs of the body and is analogous to regeneration after partial thyroidectomy.

Smith, having in mind this work of Marine's and other investigators, attempted to find out if in thyroid glands the administration of potassium iodide would in any way tend to overcome the thyroid need after partial thyroidectomy, as claimed by Marine, and thus prevent or retard the growth of the grafts which Cristiani states is controlled by the need.

Some fifty-four animals, with 162 grafts, were used in these experiments, and the author was able to recover successful grafts in a great majority of the animals. Some young grafts were studied in order to observe the early regeneration of the tissue. The younger grafts showed a central necrosis, with only the peripheral thyroid tissue persisting. The central necrotic area became gradually replaced by a growth of connective tissue from the periphery. In the older grafts the thyroid tissue appeared normal, except for the presence of increased connective tissue. In some cases there seemed to be relatively more connective tissue in the animals which were given potassium iodide than in the controls, but the condition was not constant.

The author asserts that no conclusions can be drawn from his experiments as to the condition of the homeo-transplants. From his investigations he believes that the administration of potassium iodide to a guinea pig in which a piece of its own thyroid gland has been transplanted does not have any marked effect on the behavior of the graft. He did not find atrophy of the grafts, as reported by Cristiani, after the use of thyroid tablets. Second, he believes that thyroid grafts show early central necrosis. The peripheral acini only remain intact. Regeneration takes place by the growth of thyroid tissue from the peripheral acini towards the center. These findings, he states, agree with those of von Eiselsberg, Sultan, Cristiani, and Enderlen.

Studies in Anaphylaxis. (A study of the cellular theory by the graphic method.)

RICHARD WEIL. *Journal of Medical Research, May,* 1914, *Vol. XXX, No. 2, Page* 87.

In this study of anaphylaxis the author endeavors to determine whether reaction occurs within the cells of the body, as is believed by some, or in the fluids, as has been claimed by other observers. To clear up these disputed points he has carried out a long series of experiments, and beginning he points out the fact that guinea pigs which have been injected with the serum of a rabbit immunized against a foreign proteid become hypersentitive to that proteid. In previous experiments by Dale it has been shown that the uterus of a guinea pig which has been passively sensitized by this device, making use of the serum taken from an immunized guinea pig, presents exactly the same anaphylactic reaction as does that of an actively sensitized animal.

From his study, the author concludes as follows:

I. The uterus of a hypersensitive guinea pig responds in a characteristic manner upon the addition of the antigen (Schultz-Dale).

II. The presence of immune bodies in the blood of the guinea pig, whether in small or in large amounts, does not lead to the slightest response upon the addition of antigen to the uterine preparation.

III. Desensitization of the living guinea pig after active sensitization desensitization is complete the uterus fails entirely to react upon the addition of the antigen; if incomplete, the uterine contraction is correspondingly enfeebled and sluggish.

IV. The uterus removed from an actively sensitized guinea pig which has been killed in anaphylactic shock may either fail to respond or may give a somewhat impaired response. From the latter observation the conclusion is drawn that a sensitive animal may be killed by an amount of antigen considerably less than would be required to saturate the antibody content of the animal.

V. In passively sensitized guinea pigs it is shown that the dose of immune serum sufficient to prepare the guinea pig for a fatal anaphylactic shock induces a uterine condition in which the addition of antigen leads to a typical response. Smaller amounts, which in vivo prepare the guinea pig for a moderate reaction, give, as an analogous result, a proportionally diminished response in the uterine preparation.

VI. Desensitization of the passively sensitized guinea pig deprives the uterus of its power of response.

VII. The gradual and spontaneous loss of sensitiveness by the passively prepared guinea pig is accompanied *pari passu* by a loss on the part of the uterus of its capacity to respond to the antigen.

VIII. This loss precedes the development of an anaphylactic condition towards the heterologous (rabbit) immune serum employed, exactly as in the living animal.

IX. These data lead to the following generalizations:

(A) The anaphylactic condition is entirely dependent upon the sensitization of the cells of the body.

(B) All conditions which in any way influence the degree of sensitiveness of the cells in the same degree alter the anaphylactic state, or sensitiveness, of the animal.

(C) The presence of immune bodies in the blood, whether in small or in large amounts, does not in the slightest degree contribute towards the production of the anaphylactic response in the guinea pig.

SURGICAL PATHOLOGY.

Edited by George E. Beilby, M. D.

The Peripheral Origin of Surgical Shock.

Frank C. Mann. *Bulletin of The Johns Hopkins Hospital, July,* 1914, *Vol. XXV, No.* 281, *Page* 205.

It occurred to the author in undertaking this study on surgical shock that despite the enormous amount of work that had been done along this line, there was still among recent writers no general agreement as to the cause and nature of the condition. He found in a critical review of the literature an astounding amount of contradictory experimental data and a great number of diverse conclusions based thereon. This condition of the subject was the author's reason for undertaking the present investigation. He endeavored, first, to determine definitely what is and what is not shock. Second, to settle as nearly as possible the chief questions in dispute. Third, either to correlate and harmonize the separate conclusions arrived at by the methods just described into a comprehensive theory of shock, or else to define as nearly as possible the limits of our present knowledge.

The data which the author has presented seems to justify the following conclusions:

1. It is impossible to reduce the anesthetized animal to a state of shock by any degree of sensory stimulation, provided all hemorrhage is prevented and its abdomen is not opened.

2. They were unable to show that acapnia is a primary factor in the production of shock.

3. Shock is not due to disturbance of the respiration, but the respiratory center is more quickly injured than any other vital center by shock.

4. The vaso-motor center is not depressed nor fatigued in shock. It is the most resistant of all the vital centers. The peripheral and untraumatized visceral arteries are constricted in shock.

5. Shock is not due to primary failure of the heart nor to involvement of the cardio-inhibitory or cardio-accelerator mechanism.

6. It is possible to produce the signs of shock by the use of excessive heat or cold.

7. The easiest and most certain method of producing shock is by exposure and traumatization of the abdominal viscera. This, judging from the literature, has been the method used by nearly all investigators of shock.

8. Shock produced by exposure and trauma of the abdominal viscera is not due alone to a paralysis of the vaso-motor mechanism of the splanchnic area. This has been shown by two crucial experiments. (1) Section of the cord or splanchnic nerves does not produce shock. (2) When all the abdominal and thoracic organs are taken from the animal (Carrel) this "visceral organism" can still be kept alive for many hours, and it can digest food, excrete urine, etc. Therefore, some other cause than vaso-motor paralysis or inhibition is involved.

9. The cause of shock is the tremendous loss of red cells and fluid from the blood, due to the reaction of the great delicate vascular splanchnic area to irritation—an acute inflammation of the peritoneum, due to trauma and exposure to the air and changes of temperature. The great amount of this loss is apparent when it is taken into consideration that the peritoneum has an extent as great as the entire cutaneous surface of the body. The factors involved in this reaction to irritation are the same as those involved in any other local inflammatory process, and certainly do not involve the nervous system to any greater extent. The profound general effect is due to the actual loss of red cells and fluid from the circulating blood through stasis, diapedesis, exudate, endothelial changes, etc. It is to be noted that some of the classical descriptions of

inflammation were made from observations on the exposed omentum and mesentery. In the course of operations in which the abdomen has not been opened, a loss of fluid and cells from the blood occurs. But the loss is, except when great areas of subcutaneous tissue have been exposed, comparatively unimportant.

10. Certain accessory factors which help to produce the condition of shock should be mentioned. These are muscular relaxation, decrease in intra-abdominal pressure and impaired respirations, all of which tend to decrease the amount of blood returned to the heart. The effect of chills and the use of hot applications should be considered.

11. Degenerative changes in the cells of the central nervous system are the result and not the cause of shock. Dolley states that identical changes in the nerve cells are produced by hemorrhage and shock.

12. General anesthesia of moderate depth prevents painful impulses from affecting the nerve cells of the central nervous system. Nerve blocking under such conditions is useless, so far as the prevention of shock is concerned.

13. A relatively slight decrease in blood supply may be sufficient to depress markedly the cells of the cerebral cortex. Care should, therefore, be taken to exclude this factor before ascribing such depression to inhibition.

14. The use of the word "shock" should be avoided, and instead an accurate and detailed description of the patient's condition should be given. If the term be used at all it should be applied to the condition in which, without any grossly discernable hemorrhage having occurred, the amount of circulatory fluid is greatly diminished on account of stagnation of the blood in the smaller veins and capillaries or by exudation of the fluid and cellular elements of the blood from the same.

The Significance of the Thymus Gland in Graves' Disease.

WILLIAM STEWART HALSTED. *Bulletin of the Johns Hopkins Hospital, August,* 1914, *Vol. XXV, No. 282, page* 223.

Dr. Halsted has long been impressed by the interrelation of the various ductless glands and particularly the relation of the thymus to the thyroid gland and its bearing upon the various symptoms which are classed as being those of Graves' disease. This article forms a valuable contribution to our knowledge of the subject.

Halsted states that from the facts gleaned at the autopsy table, from experiments on animals, and above all, from the results following primary thymectomies, they have convincing evidence that the thymus gland may play an important part in Graves' disease, and in some cases assume the title rôle. Some of the most puzzling features of the disease are made possible of interpretation by the discovery of the influence which the thymus may exert. He believes that there is little doubt that the secretions of the two organs concerned in the production of the Basedow picture have a relationship. Antagonistic factors are also at work in the two glands, the presence of which is indicated sometimes directly and sometimes indirectly by the behavior of other organs.

A number of cases are cited from his own practice and also from that of other surgeons, bearing out his views that the hyperplastic thymus in exophthalmic goitre may display an action essentially similar to that of the thyroid and that the thymus persistens aggravates the symptoms of the disease.

Primary thymectomies uncomplicated by strumectomy, and secondary thymectomies in cases not sufficiently relieved by resection of both lobes, of the thyroid would be the operations of choice for those searching for the essence of the Basedow thymus. . The combined operation would be avoided by them as much as possible until it became more definitely known how profoundly and in what particulars the thymus may influence the disease.

Clinical Study of Primary Carcinoma of the Fallopian Tube.

CECIL W. VEST, M. D. *Bulletin of the Johns Hopkins Hospital, October,* 1914, *Vol. XXV, No.* 284, *page* 305.

The author presents a statistical study of 132 cases of primary carcinoma of the Fallopian tube, including four such cases from the gynecological department of the Johns Hopkins Hospital. His own cases are reported in detail and include microscopical examination of the tissue removed. The author draws the following conclusions from his study of this long series of cases.

Primary carcinoma of the tube, while not common, is not as rare as has been supposed, and its possibility must be considered when a tumor lateral to the uterus is present. There have been four such cases in the Gynecological Department of the Johns Hopkins Hospital.

Definite symptoms are not regularly associated with the tumor, but one or more of the following are usually present: a watery, often blood-tinged vaginal discharge; abdominal pain and induration on one side of the uterus; often a tumor is present. The discharge may be intermittent in character. Each tube is involved an equal number of times by the growth, while in about 28 per cent of the cases both tubes are involved.

If the condition is still confined to the tube a complete operation (hysterectomy, double salpingo-oophorectomy) should be done; otherwise only palliative measures can be employed. A careful macroscopic examination (and microscopic, if necessary,) should be made before the abdomen is closed of every tubal tumor removed. In some cases the complete operation was done at a second laparotomy after the nature of the growth was discovered.

A microscopic examination should be made of a serohemorrhagic fluid obtained from a lateral tumor by pelvic puncture. Such a tumor should be considered malignant until proven otherwise.

Primary carcinoma of the tube may be present in association with an ovarian cyst.

The tumor is of a high grade of malignancy. At onset it may be of slow growth, but recurrence is soon noted after operation. In most cases the condition has been too far advanced for permanent relief when surgical aid was sought. Only four patients are known to be well five years after operation.

The Normal Differential Leucocyte Count.

Sydney R. Miller. *Bulletin of the Johns Hopkins Hospital, October,* 1914, *Vol. XXV, No.* 284, *page* 317.

The author was able to record the results obtained in making a large number of differential leucocyte counts upon medical students as a part of the routine work in the course in Clinical Microscopy at the Johns Hopkins Medical School.

From the analysis of his results he finds that

1. The total leucocyte count and differential formula in normal individuals are subject to relatively wide variations, which must be considered in the interpretation of studies made upon the bloods of individuals presumably suffering from abnormal conditions.

2. The interpretation of any differential count should be based upon:
   - a. A knowledge of that particular individual's normal blood picture, when possible.
   - b. The average values for the locality in which that individual resides.
   - c. A consideration of those factors peculiar to the individual which might modify that particular blood.

3. Differential leucocyte counts should always be reported in terms both of percentage and absolute numbers per cubic millimeter, and in all cases, where possible, more than one differential count should be made, specially in borderline cases in which slight changes are to be regarded as of diagnostic or prognostic value.

4. The tendency to ascribe a diagnostic value to lymphocytosis is probably overdone. Only when the mononuclear elements constantly exceed the average percentage, absolute values and upper limits of variation (25-40 per cent) for the community and when all modifying factors are considered, should one attempt to draw valuable conclusions from the figures obtained.

A Review of 100 Consecutive Operations for Goitre, with Especial Reference to the Treatment of Hyperthyroidism.

CHAS. H. FRAZIER. *Annals of Surgery, November,* 1914. *Vol. LX, No.* 5, *page* 583.

This review is based upon a group of 103 consecutive operations of which there were 81 thyroidectomies, and 17 ligations of vessels, and 5 operations for thyroglossal cysts. Grouped histologically there were 34 simple goitres, 29 adenomata, 1 sarcoma, 2 carcinomata and 32 hyperplastic (exophthalmic) goitres. Of the thyroidectomies, there were no fatalities, save one in the case of a large vascular sarcoma in a boy of 11 years. Of the ligations there were 2 fatalities, who, according to our more enlightened conception of the limitations of surgical therapy, would be now regarded as inoperable, at least in the acute phase at which the operation was performed.

With regard to the treatment of various lesions of the thyroid gland, and particularly as to the propriety of operation, the author states that he presents the situation to the patient somewhat as follows: "That the operation is peculiarly free from danger, that the patient must decide for herself whether the swelling is enough of a personal annoyance to warrant its removal, that there is a tendency in a considerable number of cases for simple goitres to undergo certain changes which will affect the heart and nervous system, and eventually lead to permanent damage of the heart, kidneys, and liver; that in exceptional instances in later life goitres become cancerous." This, without doubt, is a fair presentation of the facts.

As to the risk of operation, there were no fatalities in the author's series of partial thyroidectomies.

As to the end results in the toxic cases, Frazier's reports corresponds with those from other clinics. Of the patients which he had heard from, ninety per cent had fully recovered or were greatly improved, and of the latter a number had been operated upon within one year.

The author finds that the completeness of the cure does not depend entirely upon the successful removal of the gland, but that two other factors must be considered. First, the care of the patients after the operation which should, whenever possible, free the patient from physical and nervous strain for periods varying from several months to two years. Unfortunately, the social status of the patient may make it impossible to provide these conditions sometimes. This must be borne in mind by the practitioner into whose hands the patient falls after operation, and the completeness of the recovery will depend upon his appreciation of the need of this after-treatment, and whether the circumstances permit of its enforcement. Second, the existence of chronic visceral disease at the time of the operation must be taken into account. Some of the patients are physical wrecks with organic lesions of heart, kidney, and other organs, from which complete recovery is impossible. As Kocher has said, if all cases were operated upon within a short time after the outbreak of the disease, they would probably all be cured, and to this might be added that the mortality, low as it now is in all cases, would be reduced to that of as common a procedure as herniorrhaphy.

Finally in speaking of the attitude which the general practitioner should take in handling and advising these cases, Frazier states that if he so chooses he has the right to try nonsurgical means in the early stage of the disease before the myocardium or kidney or nervous system is permanently damaged. But if he fails to arrest the disease and does not advise operation in the curable stage, he should be just as severely censured as the practitioner who fails to call for surgical aid until his patient with acute appendicitis has developed peritonitis, or one with a callous ulcer of the stomach, carcinoma. The conditions are quite parallel. The extraordinary recuperative power of patients with Graves's disease is amazing, and in most cases, sick as they are at the time of operation, they will almost uniformly be restored to perfect or reasonably good health.

Experiences in the Treatment of Malignant Tumors by Radium.

RICHARD SPARMANN. *Annals of Surgery, November,* 1914, *Vol. LX, No.* 5, *page* 567.

Dr. Sparmann, in writing from the clinic of Professor von Eiselsberg of Vienna, reports the experiences in the treatment of malignant tumors by radium in the General Hospital of Vienna. He reports that during a period of about nine months, 52 cases of inoperable malignant growths were treated. He emphasizes particularly that only inoperable cases were treated by radium because from the very beginning they were convinced that radium should not be used in any operable cases. They also have used radiation following an operation on tumors which were not radically removed. In every case the clinical diagnosis of malignant tumor was confirmed by histological examination.

They had at their disposal 225 mg. radium and 150 mg. mesothorium. This quantity was divided into fifteen applicators. These were applied partially externally and partially internally; in the latter case in the periphery of the tumor. They often reduced the tumor as much as possible before the irradiation, and also made use of cross fire. The filters were made of silver, gold, platinum, magnalium, and brass, or of rubber in various thicknesses.

At first they gave big doses up to 11,000 mg. hours at a time. In the last five months, however, they used at the most 1,200 to 2,000 mg. hours for one dose. The change was made because it was found that it had often such a great influence on the general condition of the patient, or that the radium destroyed the healthy tissues far beyond the limits of the tumor in too short a time. In every case the patients were given arsenic in the form of Fowler's solution to improve their general condition.

Their cases were divided into two series, the first of which received preventive and the second curative treatment. Of six treated in the first way, only one has remained free from recurrence. Among all the cases treated curatively as well as preventively, only 11 have remained free from tumors up to this time. Of these seven treated curatively were five cases of pithelioma cutis (basal zellencarc). One was a case of carcinoma linguæ, one a case of metastasis in the lymph-glands after sarcoma axillæ. Of the four treated preventively, three cases were carcinoma of the mucous membrane of the mouth, one sarcoma orbitæ. In six cases they noted improvement, 14 were aggravated and in five no effect could be seen during the period of treatment. Of these 17 cases 11 died of tumor, mostly of cachexia, one from hemorrhage, one of meningitis, one of old age, one of diabetes, and one of mediastinitis.

The author's conclusions are as follows:

From the above-mentioned results it is seen that radium is not a panacea for malignant tumors. Not only does it not always help, but it often even injures patients as well in regard to the local lesions as by its harmful effect upon the general condition, manifested by tachycardia with a pulse rate up to 120 and 140, dizziness, weakness, and vomiting. The latter has been observed especially after irradiation of the neck, probably due to iritation of the vagus. The local-ill-effect is especially marked in that the health tissues are badly injured so that we cannot prevent their further destruction. There is furthermore a great danger of causing a hemorrhage or perforating a hollow organ, such as the intestines. We had 11 hemorrhages among our cases, all of them lethal. Another case died of mediastinitis.

There is no such thing as elective effect. The tumor cell is not more easily destroyed because of the specific action of the radium itself, but being a degenerated cell, it is more susceptible to the effect of any trauma. We have seen only a greater susceptibility of the epithelium in contrast to the fibrous tissue.

As far as histological changes are concerned, I can only make the statement that there is no specific change in the tissues to be seen by radium irradiation. All we see is only necrosis and subsequent scar-formation, such as could be formed spontaneously in any tumor tissue.

Radium has only a local effect, therefore it can never take the place of an operation by which we can reach as far as possible all parts of tumor dissemination as by the Wertheim operation of cancer of the uterus, or by the operation of cancer of the breast with removal of the lymphatic glands. We have noticed in certain cases that during the treatment metastatic foci have been formed in lymphatic glands.

The indication for treatment by radium in the case of a growth which has attacked a vital organ must be the same as for an operation.

The hopes, therefore, we placed in radium as a new and successful means in the treatment of malignant tumors have not been realized. Moreover, the number of cases in which one might have recourse to radium therapeutics shrinks constantly as our experience progresses.

A Study of the Influence of Splenectomy and of Certain Organs and Organ Extracts on the Hemopsonins of the Blood Serum.

Howard T. Karsner, H. H. Amiral, and A. V. Bock. *Journal of Medical Research, July,* 1914, *Vol. XXX, No.* 3, *page* 383.

In the course of investigations of the relation of the spleen to blood changes and to jaundice Pearce and Austin (*Jour. Exper. Med.,* 1912. xvi, 780) found an increase in the number of endothelial cells of the lymph nodes and noted that most splenectomized dogs which succumbed to an injection of hemolytic immune serum within 48 hours showed much phagocytosis of red corpuscles by these cells and by the stellate cells of the liver capillaries. These observations suggested the possibility that in the absence of the spleen the function of producing endothelial cells phagocytic for erythrocytes, normally a function of the spleen and to a much less degree of the lymph nodes, becomes highly developed in the latter organs.

Accordingly the following study was carried out by the authors in order (1) to confirm Pearce and Austin's observations, (2) to study the hemopsonic content of the blood of normal dogs as compared with that of splenectomized dogs, (3) to study the hemopsonic content of the venous blood returning from various organs of the body, (4) to study the influence of various tissue extracts on hemopsonic activity, (5) to compare the effects on hemophagocytosis of extracts of the lymph nodes of normal and of splenectomized dogs.

From their series of experiments the authors draw the following conclusions:

1. Provided the spleen has been removed for a period of time less than a week and more than two days, the intravenous injection of a specific hemolytic immune serum, in doses large enough to produce hemoglobinuria, is followed by marked phagocytosis of erythrocytes by the endothelial cells of the lymph nodes and liver. In the lymph nodes the process starts about three hours after the injection of immune serum, reaches its height about 24 hours after the injection and is practically complete in 48 hours, when the endothelial cells are found to contain large quantities of pigment, presumably as the result of blood destruction.

2. A study of hemopsonins of the blood serum under the experimental conditions indicated in the text fails to show that the phagocytosis of erythrocytes, so prominent in the lymph nodes of the splenectomized animal following a fairly large intravenous dose of specific hemolytic immune serum, is dependent upon local or general variations in hemopsonin in the splenectomized animal or is influenced by organ extracts of normal and of splenectomized animals.

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ALBANY MEDICAL ANNALS

Original Communications

THE WASSERMANN REACTION.

Given before the Schenectady County Medical Society, March 9, 1915.

By WARREN B. STONE, M. D.,

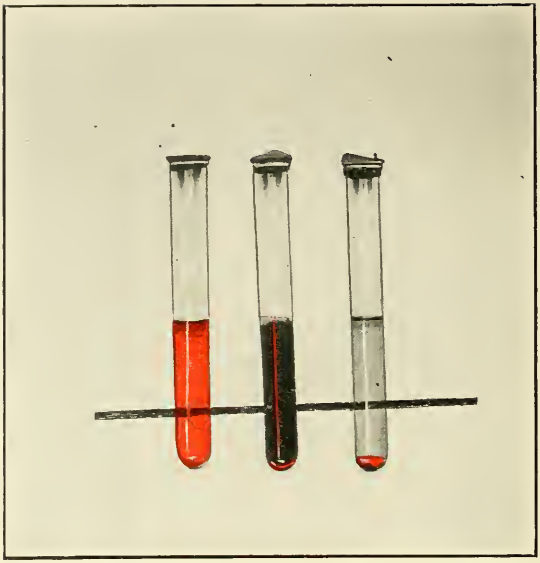
Pathologist to the Ellis Hospital and to the Schenectady Laboratory Association.

When, in 1901, Bordet and Gengou performed the following biological experiment, how little they dreamed of the far-reaching results of their work, how the diagnosis and treatment of syphilis would be put on a plane many degrees higher in scientific accuracy than it then was.

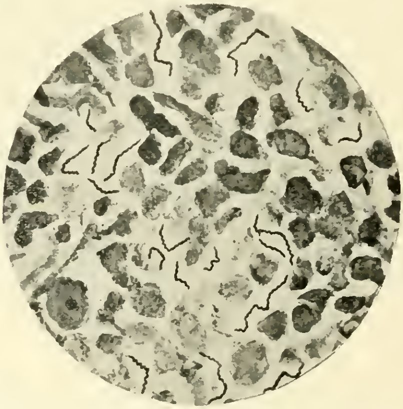
All this because of their study of the factors of Hemolysis. It simply shows that research work carefully and thoroughly done by one observer may suggest to other workers lines of thought which lead into other scientific fields remote from, and often more fruitful, in practical ways, than was the soil first tilled by the pioneer. They found that if a rabbit were injected every four or five days with increasing amounts of washed red corpuscles of a sheep, that, on about the ninth day after the fifth injection the blood serum of the injected rabbit had developed a power highly destructive to the erythrocytes of sheep's blood. In developing this phenomenon, Bordet and Gengou originated the method of complement fixation which in 1905 was used by Wassermann and Brouck as a method of detecting typhoid bacilli and anti-bodies, and in the following year Wassermann, in collaboration with Neisser and Brouck, proved the feasibility of using this method in the diagnosis of syphilis. Muller and Oppenheim, in 1906, first detected gonorrheal conditions by this reaction.

ILLUSTRATION NO. I.

An antigen or anti-body generator is any substance whose introduction into the animal body will cause the manufacture of



No. 1. First tube contains suspension of sheep corpuscles hemolized by action of anti-sheep amboceptor and complement. Second tube contains a suspension of sheep corpuscles. Third tube is same as the second except that it has stood for 24 hours and the cells have all settled to bottom of tube.



No. 2. Semi-diagrammatic drawing of Levaditi Stained section of foetal syphilitic liver, showing Spirochaetae Pallidae.

anti-bodies, or amboceptors, as they are often called. An illustration of this may be cited in the manufacture of diphtheria anti-bodies or antitoxin by the injection of the diphtheria toxin in the blood stream of a horse. This anti-toxin or anti-body, when injected in a person suffering with diphtheria in the presence of a substance called complement, combines with the diphtheria antigen and the patient is relieved of the toxemia, thus the phenomenon of complement fixation is demonstrated, in this case, by the cure of a patient and in the experiment of Bordet and Gengou, by the destruction of the sheep's corpuscles, which sets the hemoglobin free in the salt solution and which produces a clear red transparent fluid. This is known as hemolysis. It is very important, at this point, to remember that the hemolysis of blood corpuscles is the one available method by which complement fixation may be demonstrated to the eye so this fact makes it an ideal indicator in other complement fixation reactions.

It is a fact, which has a most important bearing on the subject of complement fixation tests, that the anti-bodies elaborated by natural disease or by experimental infection are specific. The tubercle bacillus produces a characteristic tubercular anti-body and so on down throughout the whole list of infections; each bacteria causes the formation of an amboceptor that is absolutely specific and they cannot be interchanged in any fixation reactions. One exception must here be noted for it has been found that a non-specific lipoid may be used with success in the Wassermann Reaction but, in general, anti-bodies are found only in animals which have reacted to the corresponding antigen. They are not destroyed by a half hour exposure to 56 degrees centigrade and are thus termed thermostabile.

Complement is thermo labile, being destroyed by this 56 degrees of heat. Complement is found in all bloods but, as the amount varies, it has been found necessary to destroy all the complement in the sera, which are to be tested, and to use only that which is present in 1/10 cubic centimeter of serum, which has been separated from the blood of a freshly killed guinea pig.

By complement fixation is meant the phenomenon which occurs when a serum containing anti-bodies is brought in contact with its corresponding antigen in the presence of free complement. When this is done the complement is completely consumed in binding the antigen and anti-bodies, hence, the terms "Complement Fixation," "Complement Deviation," or "Complement Binding." Complement unfortunately can not be measured by any simple method and it is necessary to employ a biological procedure to determine whether or not it has been bound, and it is the Hemolytic System of Bordet and Gengou, which shows most clearly and ingeniously, on which side of the test the complement has finally been caught and fixed.

In the above explanation the washed sheep cells have been considered as antigen and the serum of the immunized rabbit is the anti-body (on the hemolytic side of the test).

Now, remembering that an antigen is a body that generates anti-bodies, let us consider with what we have to deal in cases of leutic infections.

It is self-evident that the Spirocheta Pallida is antigen in syphilitic infections, but it can not be used practically in doing the Wassermann reaction, because it is grown with such great difficulty. Very few besides Noguchi, whose monographs on this organism are classical, have even grown it in pure culture. As a substitute for the organism itself, Wassermann used as an antigen an extract of the liver of a syphilitic foetus.

Illustration No. 2.

Later experiments have shown that other tissues or organs, for all practical purposes, can supply the antigen, which has been found to be a lipoid substance, thus the normal hearts and livers of cattle, dogs and guinea pigs can furnish a suitable antigen for use in this test, but it must be borne in mind that not all tissues, even the syphilitic liver, always produces a usable antigen so that, each time an antigen is prepared it must be tested and standardized before using. In the case of syphilis, the anti-body or amboceptor is a substance in the blood produced by the reaction of the body cells against the poison produced by the Spirocheta Pallida. So it is clear that a normal blood contains no syphilitic anti-bodies and a syphilitic blood usually contains them. Therefore, the Wassermann Reaction is used to demonstrate whether or not certain bloods contain syphilitic anti-bodies.

From the foregoing explanations, it will be clearly seen that complement will be bound or fixed to the syphilitic anti-body if the corresponding antigen is present in the same body, or in performing the Wassermann Reaction, in the same test tube. Now if we later introduce sheep cells and anti-sheep amboceptor into the same tube hemolysis cannot take place because all the complement has been used in binding the first anti-body and antigen, with which it came in contact and there is none left to complete a second fixation, which is made visible to the eye by the phenomenon of hemolysis. This is a Positive Reaction.

On the other hand, if there is no anti-body it is self-evident that the complement cannot be fixed, so when we now add the sheep cell and amboceptor fixation immediately takes place and the phenomenon of hemolysis occurs, which means a negative reaction.

This, in a nut shell, is a description of the Wassermann Reaction, in practice it is a great deal more difficult and complicated because of the various controls necessary so that we may be assured that all the factors and delicate reagents used in the test are of a strength and quality which will insure reliability. The following is a short description of the various factors used in performing the test.

1. The patient's blood should be drawn in a sterile manner from the median vein and allowed to clot in a cool place, with no agitation, so that a clear blood free serum may be assured.

2. The antigen, as has been stated, is an alcoholic solution of a lipoid substance, emulsified in saline solution just before the test. Some believe that the reaction is more delicate if the antigen is fortified with four-tenths of one per cent. of cholestrin.

3. The syphilitic amboceptor or anti-body is a substance which the test is endeavoring to show to be present or not in the patient's blood. It is present in the positive control and absent in the negative control, which are always included in every series of tests for a purpose of comparison.

4. The only complement allowed in any appreciable amount in the test tube is that present in the serum of a freshly killed guinea pig.

5. On the hemolytic or indicator side of the test, the antigen is represented by an absolutely serum free, five per cent. suspension of sheep's cells in 95/100 per cent. salt solution.

6. The amboceptor on this side of the reaction is the serum of a rabbit treated by injections of sheep cells as described at the opening of the paper.

These are the reagents necessary for the test and here, possibly, it will not be out of place to give a short description of the technique.

Into each of two test tubes, which contain three cubic centimeters of saline solution, is placed one-fifth of a cubic centimeter of inactivated serum of the blood to be tested and also one-tenth of a cubic centimeter of complement. One tube is for the test proper and the other is for the control and they are so marked. To the test is now added one unit of antigen. The control receives no antigen, because, in this tube, we wish to have a known factor of fixation missing: and, as a result, we should always get complete hemolysis at the end of the test. In order to properly judge its reliability, it is always necessary, at the time the reaction is done, to also test the sera of known positive and negative bloods. This is done so that we may have known standards for comparison. Every tube is now well shaken and placed for an hour in the thermostat.

During this hour, at 37 degrees centigrade, if the serum is syphilitic, the complement binds the antigen and anti-body and is thereby rendered powerless to cause hemolysis during the latter part of the test. After the hour's incubation each tube now receives two units of anti-sheep amboceptor and one cubic centimeter of the five per cent. suspension of sheep cells. Again the tubes are all placed in incubation, after thorough agitation, and are examined from time to time. After about fifteen minutes we will notice that we are beginning to get hemolysis in all of the controls (in all the tubes in which no anigen was placed) and in the known and unknown negatives. In about an hour the test is completed and the controls and negatives show complete hemolysis while the positives show varying degrees of inhibition of hemolysis. In strongly positive reactions there will be no hemolysis and, after standing twenty-four hours, there will be a deep red accumulation of cells at the bottom of the tube and a clear almost colorless supernatent fluid. In varying degrees of weaker reactions the fluid shows more and more color and the deposit of cells becomes less and less.

ILLUSTRATIONS NOS. 3 AND 4.

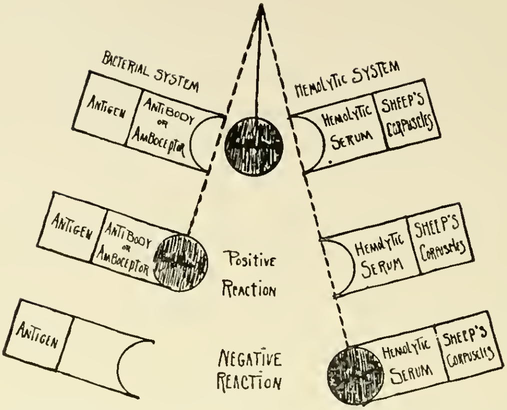
Syphilis is proverbially a mimic of other diseases so that we must be continually on the alert, for, if we are not, surely somebody will be fooled and a specific case will suffer for want of diagnosis and treatment and non-luetic cases will suffer, both from mental pain such a diagnosis usually brings, and from the strong medication necessary in treating syphilis.

Instead of giving a mass of statistics about the Wassermann Reaction, we thought it would perhaps be more interesting and more valuable to give a few illustrative cases which show varying types of the disease and which indicate how successful the Wassermann reaction has been as an aid in diagnosis.

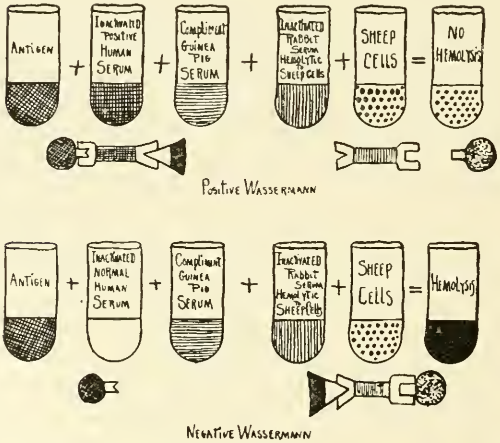
CASE NO. 1.—A 15-year-old high school girl, referred by Dr. O'Brien, was afflicted quite suddenly in October, 1914, with failure of eye sight and was found to be suffering from a scleral and eppi scleral congestion, with a low grade iritis combined with a marked cloudiness of the vitrous. Vision was 20/100 in each eye. She could scarcely distinguish her fingers when held a few inches before the face. There was no specific history obtainable and the patient showed no stigmata. The Wassermann reaction was strongly positive. Under appropriate treatment her eye sight immediately improved and now each eye gives a test of 20/15, which is better than normal.

CASE NO. 2.—A few months ago Mrs. M. consulted Dr. Lord. She gave no specific history. She is married, 47 years of age, and about ten years ago the sight of the right eye began to fail and in a few weeks became so imperfect that it could only distinguish light from darkness. She now complains of slight pain and failing vision in the left eye. Examination showed a papillitis with clouding of the vitrious. The Wassermann was positive and under treatment she gradually improved until now the sight of the left eye is practically normal and she is now getting considerable use from the right eye, which for a period of ten years had been practically blind.

CASE NO. 3.—Mrs. G., a patient of Dr. Ham, has always enjoyed good health. She has several children which are well and show no evidence of disease. On September 15th she had a miscarriage of twins, pregnancy was then at about four months. About October 1st she suffered from a severe uterine hemorrhage which greatly exsanguinated her and which required packing to control. After some decidua had been removed the hemorrhage ceased and she made a slow recovery, lengthened because of a slight sepsis. About January 1st she was again seen. She was very weak and anemic and had developed heart lesions which were not present at the former examinations. There was evidence of a mitral regurgitation and aortic stenosis. The Wassermann reaction was strongly positive.



No. 3. Diagrammatic representation of Complement Fixation Tests (after H. Fox), which shows complement as a freely swinging pendulum.


ANTIGEN
+
INACTIVATED POSITIVE HUMAN SERUM
+
COMPLIMENT GUINEA PIG SERUM
+
INACTIVATED RABBIT SERUM HEMOLYTIC TO SHEEP CELLS
+
SHEEP CELLS
=
NO HEMOLYSIS
Positive Wassermann
ANTIGEN
+
INACTIVATED NORMAL HUMAN SERUM
+
COMPLIMENT GUINEA PIG SERUM
+
INACTIVATED RABBIT SERUM HEMOLYTIC TO SHEEP CELLS
+
SHEEP CELLS
=
HEMOLYSIS
Negative Wassermann

No. 4. Diagrammatic illustration of the Wassermann Reaction and also showing it as an equation involving the various interlocking factors.

She is now greatly improved, but, of course, the impaired heart cannot be cured.

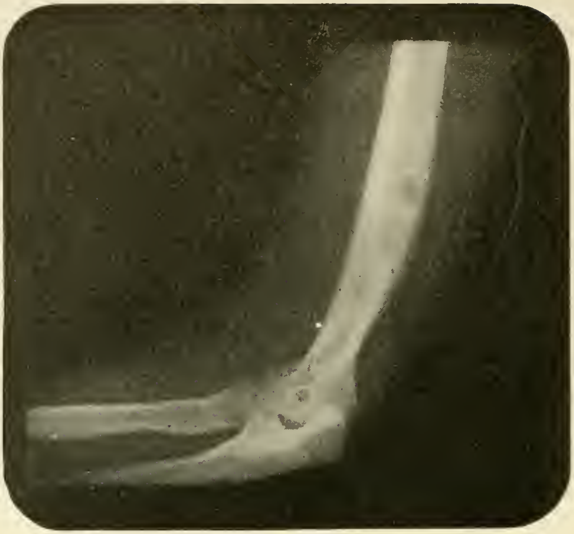
The rôle of syphilis as a cause of cardiac lesions has lately become recognized as the most important etiological factor next to rheumatism.

Case No. 4.—We have had quite a series of cases of pityriasis, some of which might have had serious complications. A domestic nurse, married but living in an estranged relation with her husband, was broken out in a macular rash which was diagnosed by one physician as syphilitic in character. She was referred to me by Dr. Reed, who doubted the specific diagnosis. The Wassermann was absolutely negative and the future course of the disease disproved any suspicion of a specific nature.

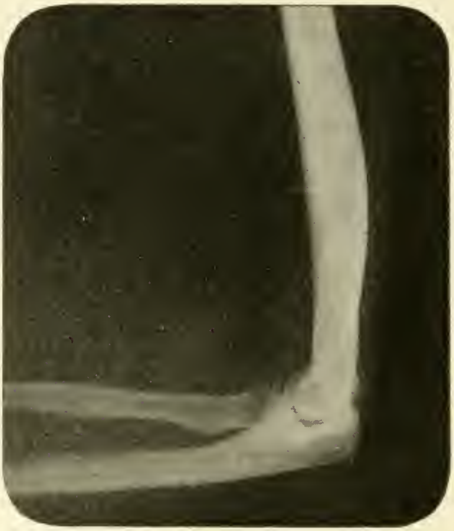
Case No. 5.—A young lady, a case of Dr. Goud's, had the chest and abdomen well covered with macular and circinate rash, which was very suspicious in character, and certain features of the history made a diagnosis of syphilis not improbable, but a negative Wassermann proved its non-syphilitic character, and the subsequent course of the disease showed that it was one of these cases of pityriasis which can be easily confused with syphilis.

Case No. 6.—A young man, a patient of Dr. Garlick's, was engaged to be married and a few days, after recovering from a mild febrile attack, broke out in a profuse macular eruption which was very similar to that in these cases of pityriasis. He gave no history of exposure and no evidence of initial lesion could be found. The Wassermann reaction in this case was distinctly positive and a few days later he developed several mucous patches. The initial lesion in this case must have been so trivial as to have been totally unobserved.

Case No. 7.—J. D., aged 19, at the age of 6 fell, striking the right side on a pile of bricks and three months afterward a swelling was noticed on the right hip. After three months more he was taken to a hospital and the upper portion of the shaft of the femur was removed when a diagnosis of osteomyelitis was made. The wound discharged for nine months and then became healed with no apparent shortening. The present illness began about December 24th with pain and some restriction of motion, and some swelling of the lower end of the humerus. There were no chills, fever or other constitutional symptoms, and twelve days later he again sought advice. There was more pain, more tenderness and considerable swelling of the soft parts. An X-ray was taken and a Wassermann reaction was done. He was admitted to the hospital on January 12th. The Wassermann being positive, on January 13th specific medication was instituted and on the 14th salvarsan was given. A few days later the pain had almost entirely disappeared. Oedema and the swelling of the soft parts was much less and the patient was better in every way. He is now working, has no pain, no swelling of the soft parts, but, as yet, the con-



No. 5. Radiogram of arm of J. D. taken on Jan. 11th, showing swelling of the soft parts, separation of the periosteum, bony swelling and cavity formation.



No. 6. Radiogram taken on April 5th, showing marked improvement.

dition of the bone itself has but little changed. In this case we could obtain no specific history or luetic stigmata except that the enamel deposit of the teeth was defective. We again saw the patient on March 8th and the bony swelling had somewhat resolved and he obtains perfect use of the arm.

ILLUSTRATIONS NOS. 5 AND 6.

CASE NO. 8.—A case of Dr. Samarini's, a man about 40 years of age, complained of sharp lancinating pains in the lower extremities. This was so severe that opiates were obliged to be given almost every night. The pupils were rather sluggish and the knee jerks absent. Wassermann reaction was positive both in the blood and spinal fluid and an injection of salvarsanized serum almost immediately controlled the pain.

CASE NO. 9.—A school boy 9 years old, rather stunted and ill-developed, was backward for his age and had had a very hoarse voice for over a year, during which time he had been under observation. Upon finding a positive Wassermann, proper treatment was instituted and the voice now is very nearly clear. The child is also doing much better in his studies.

CASE NO. 10.—Mrs. F., a patient of Dr. Betts', was taken early in December with gradually increasing vertigo, which became so severe that she was obliged to go to bed and remain there about six weeks. She also suffered greatly from headache and double vision caused by paralysis of one of the external muscles of the eye. Her left knee jerk was greatly exaggerated and there was some congestion of the left retina. The diagnosis lay between a brain tumor and a syphilitic gumma. The Wassermann reaction was positive. The patient is now very nearly recovered from all her distressing symptoms.

CASE NO. 11.—Mrs. X. of Dunkirk, N. Y., a patient of Dr. Collie's, had always been well and healthy in childhood and early adult life. She was married in 1905. Two years after marriage gave birth to twins which were rather ill-nourished and lived only a short time. About a year after this she developed neuralgic pains in the back, back of the neck and in the right arm. These pains became more severe and frequent and finally she developed a marked neuritis of the right arm which lasted several weeks. At times subsequent to this attack she suffered somewhat from neuralgic pains, but in general she regained her strength and enjoyed her usual good health until her present illness began about eighteen months before she came to Schenectady. She noticed that she was very gradually losing in strength and weight and that she was developing a marked pallor. Her medical attendant gave her iron and tonics, but the strength and weight steadily diminished and the anaemia became more pronounced and a new symptom developed. Pain and tenderness was noted in the right hypochondrum. The pain and the tenderness in this region steadily grew worse and at last, because of her serious condition, she was referred by her physician to an eminent Buffalo surgeon. After a careful examination he mapped out a large mass attached to the under surface of the liver, probably connected with the gall bladder and possibly to the transverse colon. The relatives were told that she was suffering from an inoperable carcinoma and the attending physician was instructed to render the remaining six months of her life endurable by opiates. The next day she came to Schenectady and an examination revealed conditions substantially those that have been stated, but it was decided to rule out the possibility of a gummatous condition by use of a Wassermann. The Wassermann was positive. After one injection of salvarsan, the growth simply melted away. She steadily gained in strength, weight and her general condition became much better. She now weighs thirty-five pounds more than she did a year ago and would be absolutely well, but is suffering from nervous shock caused by the sudden death of her husband.

It must not be considered that the Wassermann reaction is an absolute-specific test for syphilis, for it is not. It has its limitations which must be borne in mind. Scarlet fever, certain cases of leprosy, yaws, and sleeping sickness often gives positive reactions. A few cases of carcinoma, with apparently no specific taint, have given positive reactions.

It is rarely positive before two weeks after the appearance of the initial lesion and is never present uniformly enough to make it even approach the dark field identification of the spirochaetae as a means of diagnosis and is therefore never used as a routine procedure in the first stage of the disease.

In untreated secondary cases it is very nearly always positive, except in a very small percentage it fails, because some bloods are naturally hemolytic to sheep cells. In these cases the Noguchi test usually gives a positive reaction, when the Wassermann fails. In treated secondary cases, the character of the reaction depends upon the amount and quality of the treatment.

In later cases, tertiary, late latent, and the so-called post or para syphilitic affections, the percentage of positive reactions drops to probably not more than 85 per cent.

While the percentage of negatives is not very large, still it is undesirable, but by repeating the test, by performing a provocative Wassermann, by testing the spinal fluid, by doing the Noguchi reaction as a control, and by use of the luetin reaction, this percentage of negatives may be greatly lowered.

The Wassermann reaction as a guide in the treatment and as an index as to the cure of the disease is very valuable, but it must not for a moment be considered that one negative reaction is evidence of a cure.

In our present state of knowledge it is only after a proper course of treatment, after a series of three or four negative reactions have been obtained that we can say, "In all probability you are cured."

In this short outline we have endeavored to give a fair presentation of the use of the Wassermann reaction and hope that we have disabused the minds of some of you as to the absolute specific nature of the test and will caution you to remember that a negative reaction does not always mean no syphilis and that non-syphilitic affections can occur in specifics. In doubtful cases, which, because of the delicate nature of the reagents, are bound to occur, diagnosis and treatment must be governed by the clinical evidence.

THE TECHNIQUE OF LINDEMAN'S BLOOD TRANSFUSION.

Presented at the November, 1914, meeting of the Surgical Club, Schenectady.

By ARTHUR KRIDA, M. D.,
Adjunct Professor of Physiology, Albany Medical College.

The purpose of this paper is to describe in some detail the syringe-cannula operation for blood transfusion devised by Lindeman. Blood transfusion by this method is becoming more and more the method of choice; it has greatly extended the field of applicability of a procedure, which, on account of the technical difficulties associated with blood-vessel surgery, has hitherto had a rather restricted application.

At the time that I was a house physician in Bellevue Hospital, New York City, Lindeman was the resident pediatrician in that institution. It so happened that I had the opportunity of observing the evolution of syringe-cannula transfusion. In attempting to analyze the factors which have contributed to the success of the operation in his hands, it impresses me that the most important factor, next to the invention of the very ingenious cannulas, is his painstaking attention to certain details, the importance of which may not on first examination be apparent.

The technique is outlined in Lindeman's preliminary communication in 1913.[1] I will endeavor to amplify the description in what is to follow, and I will ask your indulgence if I seem to dwell at some length on details.

Instruments and Paraphernalia.

The instruments consist of two sets of cannulas, two tourniquets, and twelve syringes.

The cannula devised by Lindeman consists of three parts telescoped one within the other, and fitting snugly. The innermost is a hollow needle of 20 gauge; the middle and inner parts fit snugly over the needle, but are not pointed. The middle part is slightly shorter than the needle, and the outer is shorter than the middle part. The proximal ends of the middle and inner parts are provided with thumb screw caps; the end of the outer part is fashioned to receive accurately the tip of a Record syringe.

Twelve Record syringes of twenty cubic centimeters capacity are used, the retaining caps being removed for the operation. The syringes are sterilized by immersion in ninety-five per cent alcohol for a half hour, and then carefully dried by manipulating the plungers to and fro fifteen or twenty times. They are then placed on the instrument table, with the plungers pushed all the way in. The cannulas are sterilized by boiling.

The donor and recipient are placed on tables, and between them, at the head end, is placed an oblong instrument table. On the table are placed three eight-quart basins, one containing warm saline solution, and the other two boiled water. During the operation, the syringes are washed in the boiled water.

Operation.

The operation requires the services of four persons: (1) the operator, who injects the blood into the recipient's circulation; (2) his assistant, who withdraws the blood from the donor's vein; (3) an assistant (nurse), who supplies the first assistant with clean syringes, and takes from him and deposits on the instrument table within reach of the operator the filled syringes; and (4) an assistant (nurse), who rinses the used syringes in water, and whose duty it is to have ready a syringeful of warm saline for the operator and his assistant.

The operator should see that the arrangement of patients, tables, etc., is convenient, and that the instruments are in satisfactory condition.

Asepsis and antisepsis as for a major operation is employed.

The skin in the region of the puncture is prepared with iodin. Superficial veins are utilized for the punctures, usually the median basilics, although the external jugulars may be used if the basilics are not accessible.

A tourniquet is placed rather loosely about the donor's arm to congest the veins, and this tourniquet remains in position throughout the operation, unless the transfusion be temporarily discontinued. The operator now inserts the cannula into the donor's vein, and when he determines that the blood flow is satisfactory, attaches a syringe filled with saline solution, and turns it over to his assistant.

There is opportunity for the display of some little skill in making the puncture. One should practice this detail in obtaining specimens of blood for Wasserman reactions, blood-letting, etc., before trying it in a transfusion case. On the technique of the cannula insertion, I quote from the original communication:[2] "The cannula is held in a position parallel to the vein with the thumb on the thumb-screw of the innermost cannula. The skin is then punctured, and the cannula is forced into the vein. After the first joint has entered the vein, cannula 1 (needle) is withdrawn a distance of about one-half inch. (This prevents the vessel wall from being injured or punctured by the needle after the vein is entered.)

"With the thumb now on the thumb-screw of 2 (middle) the cannula is forced further in until the second joint has entered the vein. Cannula 2 is then withdrawn a distance of about one-half inch. (Cannula 3 alone can come in contact with the vessel wall.) Cannula 3 is then pushed gently into the vein to a desirable length; usually three-quarters to one inch will suffice.

"Cannulas 1 and 2 are now withdrawn entirely. If the vein has been successfully entered, blood will flow through the cannula. When the first drop appears a syringe containing warm saline solution is immediately attached and a very slow flow of saline is maintained through the cannula."

The operator now places a tourniquet about the recipient's arm, and inserts the cannula into a suitable vein. This tourniquet is then removed. Until the donor's blood is available, he gradually introduces a little saline solution. He is now ready to proceed with the transfusion.

The assistant withdraws the blood from the donor's vein, hands the filled syringe to an assistant and receives an empty clean one from him. This he immediately attaches to his cannula so that the blood lost in the process of changing the syringes is reduced to a minimum. The assistant places the filled syringe on the table within the operator's reach.

The venous pressure in the donor's circulation is sufficient to insure an ample flow of blood; if any difficulty is experienced at this stage, it means that the cannula insertion has been faulty, and the operator should remedy the defect before proceeding further.

The operator holds the cannula in the recipient's vein with one hand and with the other grasps a filled syringe and injects the blood rapidly into the vein. After injecting one syringeful he should wait two or three minutes to observe the effect of this blood upon the donor. If severe symptoms of incompatibility arise, a new donor should be used; otherwise he may proceed with the transfusion.

Each step of the procedure can be accurately controlled, although when once under way, the operator usually has no difficulty in keeping pace with his assistant. After every three or four syringefuls of blood are injected, the recipient's cannula is washed out with a little saline solution. The last named assistant takes up the used syringes, rinses them in sterile water before placing them in position for subsequent use. No unwashed syringe should be used.

When once under way the transfusion can be completed in from three to twenty minues, depending upon the amount of blood to be transfused. The largest amount transfused by Lindeman at one operation was 2,000 cubic centimeters, and the largest amount taken from one donor at one operation was 1,400 cubic centimeters. Lindeman states that when the flow of blood from the donor's vein becomes sluggish it is a sign that his blood pressure has fallen low enough to make it inadvisable to remove any more from that donor.

If time permits Wasserman, hemolytic and agglutinin reactions should be performed with the blood of the recipient and the prospective donors.

REFERENCES

(1) Lindeman, 1913, Am. Jo'l Dis. Children, Vol. 6, p. 28.
(2) Ibid. 1914, Jo'l Am. Med. Ass'n, Vol. 62, p. 993

THE DEFINITION OF INSANITY.

Read before the Medical Society of the County of Albany, March 18, 1915.

By CHARLES STOVER, M. D.,
Amsterdam, N. Y.

The noted English jurist Lord Chief Justice Blackburn, said, before the House of Commons, "I have read every definition which I could meet with, and never was satisfied with one of them, and have endeavored in vain to make one satisfactory to myself. I verily believe that it is not in human power to do it." The Century Dictionary takes up a column to qualify its definition of insanity, while Spitzka uses more space to state what it is not than to define what it is.

The difficulty is apparent when you reflect that you must not exclude idiocy (although in New York State legally you do) nor transitory mental disorders such as occur in fevers, or intoxications. Then, there are so many physical centres in the brain, so many paths of conduction, all of which present so many variations of function that bewilderment, indeed, follows. Add to this another fact that no two individuals are alike in their mentality, and we realize the difficulty in an effort to determine a standard of insanity. It is the popular idea that there is a sharply defined line, on one side of which are the sane, and on the other, the insane.

Medically speaking, we may agree that there is some psychic alteration of the brain, or in pathological terms, we may say that there is some defect in the neurones, or in their vascular or lymph supply, or that some excretory organ is at fault, or that tissue wastes act as irritants of the brain, or that there is a toxemia.

Legally speaking, we may recognize a certain degree of "unsoundness of mind" that brings into question the responsibility of an individual for its acts. But what the law considers "mental unsoundness" is not always insanity, and, on the other hand, the law may consider one with melancholia as competent, while medically and technically, he is insane. These difficulties have led the law to assume certain definitions of insanity that are some times divergent.

In the State of New York a person is not excused from criminal liability, as a lunatic or insane person, except upon proof that at the time of committing the alleged criminal act he was laboring under such a defect of reason as either not to know the nature and quality of the act he was doing, or not to know the act was wrong. In regard to a testator, if the mind, memory or understanding are unsound, he is legally insane. In a lunacy investigation, the subject of the inquiry is insane if he is incapable of managing himself or his affairs.

These difficulties about a definition of insanity are well understood by both physicians and lawyers, while it is not so well known by the average juryman, and therefore the peculiar methods of a designing lawyer may put the doctor in a very unfair and contemptible position before the jury.

Systems of classification of insanity have naturally resulted in extreme confusion, and this is to be expected owing to our uncertain data in our literature. There are not less than forty classifications of insanity. Varying with the viewpoint of the author, they may be based upon etiology, anatomy, physiology, pathology and psychology and so on. These systems have represented in progressive periods of time the evolution of our knowledge regarding the structure and function of the nervous system. Some of us have been in practice long enough to have unlearned and then relearned the anatomy of the brain, so revolutionary has been the effect of staining methods in the preparation of tissues for miscroscopic study.

Not only in respect to the definition of insanity is this true. The physician is equally at a disadvantage when in a will contest, involving the sanity of the testator, two opposing lawyers, submit two hypothetical questions, of opposite construction and he is obliged to swear that the one denotes competency, the other incompetency; or, in other words, he has sworn in favor of both of the contending parties and is therefore a zero quantity. The whole proceeding is ridiculous and the wonder is that it is tolerated. The fact is that expert testimony is usually not required for the instruction of the court; in practice it has come to be used by the lawyer to impress the jury, that is usually not competent to properly weigh the technical questions involved; and again the medical expert is compromised. It is not so much a reflection upon the integrity of the medical expert, as it is upon the method by which he is secured. It is difficult to see how it is to be any better, unless the court appoints him and his position is made independent of the interested and biased parties to the litigation. The Dougherty case illustrates the tragic outcome when popular clamor takes the place of scientific judgment. Dougherty was a paranoic and the would-be lover of a celebrated actress. On account of his annoying but unreciprocated attentions he was sentenced to the Flatbush Lunatic Asylum. When examined by Landon Carter Gray, the latter reported that he indicated the persistence of his malady when he stated that he had been the handsomest man in the world before he had been broken up by confinement and anxiety and persecuted and wronged because of the love for his inamorata. He further stated when he had been committed to the asylum twice, and found that he had no redress, he made up his mind that the system of committing people to asylums was defective; that he sought for a long time for the best means of correcting the evil, and that he came reluctantly to the conclusion that a revolution, as he expressed it, was the only effective remedy, so that he determined to kill the physicians who committed him, the judge who had indorsed the commitment, the commissioners of lunacy who had approved of it, the officers of the asylum to which he had been committed the second time, the local commissioners of charity in whose charge the asylum was, and the State commissioners of charity who had visitorial power over all the asylums of the State. He armed himself with two revolvers and proceeded to the Flatbush Lunatic Asylum, where he shot a young assistant physician, Dr. Lloyd, backed out of the asylum, keeping everyone at bay with his two revolvers, and proceeded on the horse-cars to the Brooklyn Bridge, a distance of some seven miles, to cross over to New York, to go on with his murderous work, but fortunately he was arrested on the bridge at the instance of another physician who had followed him. He said that he was very reluctant to kill Dr. Lloyd, because he knew that the latter was a young man whom his parents had educated at considerable sacrifice, and because he was the only son, but he steeled his heart to the deed by reflecting upon the necessity of the revolution which he was thus to inaugurate. He also said that he had at first intended to shoot the cook of the institution, but that second thought convinced him that people might think that there was an element of spite in this which would detract from the moral effect of the deed. Dr. Gray remarked at this point that he thought himself that this would have been rather a small affair to kill the cook, whereupon he quickly rejoined, with a chuckle, "Oh, if you had eaten the food that that d——d scoundrel cooked, you would have wanted to kill him, too!" and laughed heartily. Nothing could impress upon him the enormity of his deed or of the plan that he had in mind. This is a typical illustration of the cold-bloodedness, or, to speak more accurately, the loss of the ethical sense, which is a prominent symptom in these patients. Their delusions, indeed, approach the nearest of all the insane delusions to the fixed and erroneous beliefs of the sane, for they will reason about them logically up to the last point of being convinced, and it may happen that in the earlier stages of the disease it may be possible to convince them for the time being of the falsity of their opinions. Between their delusions and the fixed beliefs of the sane, however, there lies this great difference, namely, that the latter do not have the predominate delusion of persecution mingled sooner or later with that of self-exaltation. In a scientific sense, therefore, these patients are not responsible. Even the dictum of Anglo-American jurisprudence, which is embodied in the statute of the State of New York declaring that a man shall be held responsible for his acts if he knows the nature and quality of his act and the consequence thereof, does not make these patients responsible, because while they may, parrot-like, state that they know the nature and quality of the act and what the punishment will be for it, it is very evident to the most superficial observer that they do not really appreciate what they are doing because of their lack of ethical sense and because of the manner in which the mind as a whole is warped by the fixed delusions of persecution and self-exaltation. It is quite another question, however, as to whether these patients should be punished by law. There can be no question but that they are very dangerous lunatics, and they should certainly be put under restraint for such time as to make it certain that they are really cured.

The brain is an infinitely complex organ with infinitely complex functions judged by the finite mind of man. Who shall say which brain is normal, the one that is judged or the one that judges.

When Socrates placed himself under the direction of his familiar Demon, or changed his course when he heard the voice of God, or acted or did not act when some one sneezed, according to whether the sneeze was on the right-hand or the left, .was he sane or insane?

What shall we say of Tolstoy? When eight years old, seized with an irresistible desire to fly in the air, from a second story window he made the movements for flying and fell sixteen feet to the ground and was sick for some time afterwards. Having the idea that one who could bear pain could never be unhappy, he subjected himself to pain by holding a weight on his outstretched arm for five minutes, or going to the barn he would bare his back and with a rope whip himself so vigorously that tears would flow from his eyes. At a later period he himself wrote that he felt he was not wholly sound in his mind. He frequently had the idea of suicide and applied various devices in order not to kill himself. " Everything is a lie," he cried, " Death alone is true."

What was the ambulatory mania of Balzac? He would so feel the necessity for a change of scene that neither his relatives or his friends would know where his temporary residence might be. Thus when called for service in the National Guard he was not to be found. How shall we characterize his estimate of his own self except to say that he was a megalomaniac. He wrote to Mme. Hanska, " I have given birth to an entire new society in my brain. What Napoleon began with the sword, I shall have completed by my pen." George Sand wrote that "his consciousness of himself was simply without bounds. He was always talking of himself and only of himself. One evening when he put on a handsome new dressing gown he wanted to go into the street with a lamp in his hand to excite the admiration of the public." His father stayed in bed for twenty years for no apparent reason, and then took up his former mode of life.

Stuart Mills places Auguste Comte in the same rank as Descartes and Liebnitz, yet his whole life was made up of attacks of madness separated by long intervals of semi-madness, during which he wrote and published his positive philosophy. It was the other positivist, St. Simon, who wrote that "Madness is nothing but great exaltation of the soul" and, "He only enters into the temple of glory who has escaped from a mad house."

Jean Jaques Rousseau started with a neuropathic heredity that went back for four generations. His father had ideas that "apparently emanated from the moon." He himself had delusions of persecutions by all the world, by Prussia, by France, by England, by kings, by women, by priests. Finally he wrote a very tender and familiar letter to God Almighty and placed it under the altar of Notre Dame de Paris.

Guy Maupassant and Alfred de Musset were subject to hallucinations and periods of madness that were reflected in their wonderful stories of morbid humanity.

The *London Medical Times* stated that there are in Victor Hugo's finest productions numerous passages which could have been conceived only by a diseased imagination, and which are indelibly stamped with madness. His uncle died insane; his brother, brilliant in his youth, was insane at twenty. One of his own daughters was a resident of an insane asylum.

What strange dual personalities are represented by Poe, Byron, DeQuincey, Coleridge, and others, who soared to heaven's heights with penetrative insight, only to fall back to the depths of hell when once again their evil genius possessed their souls?

Dryden appreciated these geniuses when he wrote

> "Great wits are sure to madness near allied,
> And thin partitions do their bounds divide."

The temperamental eccentricities of famous musicians are traditional: Schumann trying to commit suicide and dying at forty-six in an asylum; Donizétti with general paresis; Chopin a nervous wreck, erratic during his whole life that ended at thirty-nine because of tuberculosis; Wagner, of whom Nietzsche says, he is "diseased," a "typical decadent," and characterized by Max Nordau "as having a greater degree of degeneracy than all the degenerates that we have thus far seen put together"; Mozart, the type of the precocious mind, who composed his own requiem, possessed by an insane hallucination that a man stood before him commanding him to do so; Beéthoven deaf at thirty, never hearing his most beautiful masterpieces, full of eccentricities, and dying of atrophic alcoholic cirrhosis. Rossini, after writing "William Tell" at thirty-eight, suddenly ceased to write. In his fifty-fifth year he had impulses to suicide, melancholia, fits of weeping, and suffered from severe nervous paroxysms. Berlióz had a monomania of persecution, and attempted suicide.

According to Lombroso, the list of great men who have committed suicide is interminable. It is headed by the names of Zenon, Aristotle, Lucretius, Lucian, and in later years Chatterton and David. Among those who have thought seriously of it or have made attempts at it are Chateaubriand, Lamartine, Dupuytrén, Cooper, Cavour and George Sand.

By what standard shall we gauge a Christian Scientist of today, who fainting, after fooling with a felon for two weeks until it is gangrenous, still insists that there is no such thing as disease? Or another, that is led along her blind path, having mislaid her spectacles, but asserts that glasses are not essential to one of God's own?

How should we regard the woman who believes that in answer to prayer the Almighty has altered the laws of nature and effected a cure? Where belong the cures at Lourdes, the cures by faith, by Perkins metallic tractors, by suggestion, by hypnotism, and so on *ad infinitum?*

What shall we say of the man who knows that he may commit crime when he is drunk, but who nevertheless does drink, but who defends himself by affirming that he could not resist? Is he right or is he wrong? Shall we under protest recognize the law of the State that insists the offender deliberately and wilfully chooses to drink, and thereby establishes his responsibility for the crime that follows? Or must we accept the conclusion of Clouston in regard to the dipsomaniac when he says, "In the present state of the law that does not allow legal interference with their liberty,—I say it with deliberation—the sooner they drink themselves to death the better. They are a curse to all who have to do with them, a nuisance and a danger to society, and propagators of a bad breed."

Can we call it sanity when a college town, marked by unusual culture and education, as at Springfield, Ohio. hunts down the negro population, murders them in cold blood, and burns them with hot fagots? Are the English suffragettes to be classed as rebels, conspirators, criminals or simply crazy? What term will best characterize the egotism, and selfishness and lawlessness of the superman who rides rough shod over all that opposes, shall it be paranoia or Nietzscheism?

No one will deny that history is replete with instances of men and women performing great deeds of valor, achieving signal success in business, in the arts and sciences, and yet conspicuously marked by mania, by delusion, melancholia, deep superstition and ridiculous obsessions.

There is where systems of classifications stumble. The legal tendency is to establish a more or less sharply defined line between the sane and the insane, the responsible and the irresponsible in order to protect life and property for the welfare of society. It is said that human beings are of two classes, those who are locked up and those who do the locking up, the latter are in the majority, and call themselves sane, the minority dispute this assumption. As opposed to this two-block theory is the single block one, whereby all are in one group, more or less responsible; or if you view if from the other end of the line more or less irresponsible. You will recall the old Quaker, who said to his wife "I think all the world is crazy except thee and I, and even thee are sometimes queer."

In recognition of a middle class differing from the extremes, Grasset of Montpelier, has published his book on "The semi-insane and semi-responsible." This leads to what we may call the "Three-block" theory of insanity. The basis of this classification as summarized by the translator of Grasset's book, Dr. Jelliffe, rests upon the idea, by no means peculiar to Grasset, that there are two orders or classes of psychic activities, those of the superior psychism and those of the lower psychism; the former are conscious and voluntary, the latter are automatic and involuntary or subconscious. Around the term of superior psychism are grouped the ideas of the Ego, the will, personality, responsibility, etc., while about the inferior psychism are the conceptions of automatism, subconsciousness, irresponsibility, etc. A case of somnambulism is cited in illustration. Lady Macbeth cries "Out damned spot," without knowing it and without wishing it; that is to say unconsciously and automatically. She is able to carry out her long series of complicated and coördinated movements by reason of her inferior psychism, as Grasset calls it. Her superior psychism does not enter into her actions.

As Grasset states it, by this means we recognize "the existence of the semi-insane, who, without equal error and injustice cannot be classed either among the sane or among normally psychic individuals. They are distinguished from healthy minds in the fact that they are *psychically diseased* and they are distinguished from the insane in that they preserve a certain degree of consciousness and of reason. Some of these patients become insane later, or have been so before. Semi-insanity is then only a period of their insanity. Some are cured, and they are only semi-insane for a time. Others, on the contrary, pass their whole lives without ever having been at any time either wholly rational or wholly insane. It is difficult to indicate for such a vast and complex group any single medical characteristic. We might say that in the semi-insane there is a weakening of the superior psychism, and a non-controlled functional hyperactivity of the inferior psychism. It is thus that the doctrine of the distinction of the two psychisms (superior and inferior) seems naturally to throw light upon and to facilitate the medical study of the semi-insane."

To what conclusion do we come at last? I believe in practice the doctor and the lawyer are not far apart and the proof of perfect mentality is not an exaction by either one. The difficulty arises when self-interest seeks to distort facts, and law and medicine are allied to thwart the application of justice. Society must protect itself in the enjoyment of life and property, individuals must be restrained whether they are criminals or insane. The question then is broadened out into one that concerns the public as well as the individual, and in our professional declaration of sanity or insanity, we cannot be limited by the welfare of the individual alone, but must always consider in a human way his relation to the life and property of himself and others. Meanwhile let us not forget that " sanity, insanity, criminality, power over self, free-will, are mental attributes (these and similar terms are household words with all of us), but that no man knows whence they come or what they are, or how far the individual is master of himself, or is driven by the hand of fate, as represented by the conformation of the nerve cells and fibres of his brain. As has already been insisted upon, insanity is not a 'disease' or a distinct entity. Necessity for an arbitrary line between sanity and insanity is not of scientific but of legal origin, and when the medical expert affirms that he is unable to measure out accurately the exact degree of human responsibility, he simply acknowledges that he himself is a finite being and that the problems of life baffle his utmost thought. It has been reserved for judges upon the bench and lawyers at the bar to arrogate to themselves the attribute of infinity, whilst ministers of the gospel but too often teach that the last and highest revelation of a merciful God is that this poor, broken humanity, helpless so often in the grip of its own perverse nature, shall be punished by flames eternal."

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Editorial

> This year there was more than ordinary mortality in the country, especially about Boston, and mostly among their children. (New diseases the fruits of new sins.) Since which time, several diseases have been in the country more frequently than formerly; as, namely, gripings in the bowels, with violent vomiting and purging, which hath taken away many; as also a disease of the mouth or throat, which hath proved mortal to some in a very short time; as also great distempers of colds, etc., which ought to be awakening dispensations, together with others, to cause us to consider and examine whether we have not provoked the Lord with some general and unwonted sins; inasmuch as he is pleased to exercise the country oftentimes with unwonted afflictions and punishments.
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> *Chronicles of the Pilgrim Fathers*

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The New Faculty

The steps necessary for the completion of the organization of the College are being taken, as matters shape themselves to this end. In order that the trustees may have a clear field for rearrangement of the teaching staff, looking toward an adjustment of the curriculum, the present Faculty have tendered their resignations, to take effect June first. It is proposed to establish seven departments, the heads of which shall be full professors and they, with the Chancellor of Union University and the Dean of the Medical Department, shall constitute the executive faculty. For these responsible positions the following named men have been appointed, to assume their duties immediately.

Dr. HERMON C. GORDINIER, Professor of Medicine. Dr. Gordinier graduated from the Albany Medical College in 1886, and began practice in Troy immediately after graduation. He was made lecturer on medical diagnosis in 1889, and in '95 became Professor of Physiology and the Anatomy of the Nervous System, filling this chair until 1914. He received the honorary degree of A. M., from Williams College in 1895, and has contributed voluminously to current medical literature. He is the author of Gordinier's "Anatomy of the Nervous System," a standard work. Dr. Gordinier is an attending physician at the

Samaritan Hospital, Troy, and a member of the American Neurological Association, the Association of American Physicians, the American Medical Association and local societies.

Dr. Arthur Wells Elting, Professor of Surgery. Dr. Elting graduated from Yale College in 1894 and from the Medical Department of Johns Hopkins University in 1898. He had graduate study at Johns Hopkins, and was assistant at the Bender Hygienic Laboratory during the directorship of Dr. George Blumer. Dr. Elting became a member of the surgical teaching staff of the Albany Medical College in 1900 and in 1911 was made Professor of the Practice of Surgery and of Clinical Surgery. He is attending surgeon to St. Peter's, the Child's and the Albany Hospitals, and is a member of the American Surgical Association, the American Medical Association and local societies.

Dr. John Albertson Sampson, Professor of Gynecology. Dr. Sampson graduated from Williams College in 1895 and from the Medical Department of Johns Hopkins University in 1899. He was interne at Johns Hopkins Hospital in 1899 and 1900; resident gynecologist, 1903 and 1904, and an assistant in the Johns Hopkins Medical School in 1903 and 1904. He then began practice of his specialty in Albany, and was clinical professor of gynecology in the Albany Medical College from 1906 to 1911, and since 1911 has been professor of gynecology. He is attending gynecologist at the Albany Hospital and the South End Dispensary, and a member of the American Gynecological Association and local societies; and is the author of "Gynecological Note Book." His investigations upon the blood supply of the pelvic organs, carcinoma and other technical studies have become widely known.

Dr. La Salle Archambault, Professor of Neurology. Dr. Archambault graduated from the Albany Medical College in 1902, and spent three years in graduate study in Paris, Berlin and Graz, specializing in neurology and neuro-pathology. He is attending neurologist to the Troy City Hospital, St. Peter's Hospital Dispensary, and the South End Dispensary and is a member of the American Neurological Association, the Neurological Society of Paris, the American Medical Association and local societies. He became instructor in neurology in 1906, lecturer in 1910, adjunct professor in 1913, and professor in 1914. He has contributed voluminously to neurological literature, especially upon the histo-pathology of the nervous system.

Dr. ELLIS KELLERT, Assistant Professor of Pathology. Dr. Kellert graduated from the Albany Medical College in 1909, was interne in the Albany Hospital in 1910, assistant in the Bender Hygienic Laboratory in 1911 and 1912, resident physician at the Huntington Hospital of the Cancer Commission of Harvard University in 1913 and 1914 and has been director of the Bender Hygienic Laboratory during the past year. He is a member of the American Medical Association and local societies.

CHARLES M. GRUBER, Ph. D., Professor of Physiology. Dr. Gruber graduated from the University of Kansas in 1910, and after two years in the medical course, became associated with the department of physiology of the Harvard Medical School, where he received the degree of Doctor of Philosophy in 1913. He was instructor in physiology in the Harvard Medical School in 1913 and 1914, and since 1914 has been instructor in physiology in the Medical Department of the University of Pennsylvania. He has made special investigations of the relations of emotional states to the glands of internal secretion.

It is expected that the Professor of Anatomy will be appointed shortly.

The departments under these professors are to be organized, and other appointments to be announced as the details of organization are perfected.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.
ABSTRACT OF VITAL STATISTICS, APRIL, 1915.
COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

Deaths.

Consumption	43
Typhoid fever	0
Scarlet fever	1
Measles	0
Whooping cough	2
Diphtheria and croup	1

Grippe	5
Diarrheal diseases	4
Pneumonia	18
Broncho-pneumonia	12
Bright's disease	10
Apoplexy	13
Cancer	12
Accidents and violence	11
Deaths under one year	24
Deaths over 70 years	51
Total deaths	223
Death rate	24.66
Death rate less non-residents (48)	19.35

Deaths in Institutions.

	Non-Residents	Residents
Albany Hospital	10	12
Child's Hospital	1	2
County House	3	6
Homeopathic Hospital	8	10
Hospital for Incurables	0	1
Little Sisters of the Poor	1	0
Public places	1	2
St. Margaret's House	4	2
St. Peter's Hospital	4	14
Maternity Hospital	1	2
Federation of Labor Pavilion	2	0
Albany Hospital Camp	10	7
Totals	45	58
Births	212	
Still births	11	

TUBERCULOSIS.

Bender Laboratory Report on Tuberculosis.

Positive		15
Negative		46
Total		61
Living cases on record April 1, 1915		396
Cases reported:		
By card	34	
Dead cases by certificate	16	
		50
Total		446

Dead cases previously reported	27	
Dead cases not previously reported	16	
Duplicates	2	
Removed	1	
		46
Living cases on record May 1, 1915		400
Total tuberculosis death certificates filed during April		43
Non-resident deaths:		
St. Margaret's House	2	
Albany Hospital Camp	7	
		9
Resident tuberculosis deaths		34

Report of Visiting Tuberculosis Nurse.

Old cases	6
New cases	21
Returned from hospitals	9
Totals	36
Disposition of old and new cases:	
Died	1
Sent to hospitals	11
To general tuberculosis nurse	19
Remaining under treatment	5
Total	36
Visits made	23
Visits made, old cases	140
Calls at Board of Health office	29

Bureau of Contagious Disease.

Cases Reported.

Typhoid fever	2
Scarlet fever	41
Diphtheria and croup	13
Chickenpox	22
Measles	9
Whooping-cough	19
Tuberculosis	50
Mumps	2
Total	158

Communicable Disease in Relation to Schools.

	Reported D.	Reported S.F.
Public School No. 3	..	1
Public School No. 4	..	1
Public School No. 7	..	4
Public School No. 12	..	1
Public School No. 16	..	1
Public School No. 18	1	..
Public School No. 21	..	1
High School	..	1
Holy Cross School	..	5
Cathedral School	..	2
St. Casimir's School	..	1

Number of days quarantine for diphtheria:

Longest		Shortest		Average	
Longest	20	Shortest	8	Average	12½

Number of days quarantine for scarlet fever:

Longest	56	Shortest	30	Average	32 21/24

Fumigations:

Houses	77	Rooms	387

Cases of diphtheria reported	13
Cases of diphtheria, antitoxin used	13
Deaths after use of antitoxin	1

Bureau of Pathology.

Bender Laboratory Report on Diphtheria.

Initial positive	20
Initial negative	210
Release positive	3
Release negative	84
Suspicious	1
Total	318

Test of Sputum for Tuberculosis.

Positive	15
Negative	46
Total	61

Widal Tests.

Positive	2
Negative	27
Suspicious	1
Total	30

Milk analyses	31
Water analyses	1
Wassermann tests	1

Bureau of Markets and Milk.

Public market inspections	22
Market inspections	130
Fish market inspections	8
Packing house inspections	1
Slaughter house inspections	5
Rendering plant inspections	2
Hide house inspections	3
Fish peddler inspections	2
Milk depots inspected	16
Milk houses inspected	36
Milk wagons inspected	25
Stores inspected	224
Dairies inspected	26
Cows examined	474
Cows quarantined	1
Cows removed	2
Milk cans inspected	142
Milk cans condemned	2
Lactometer tests	37
Temperature tests	37
Fat tests, milk	44
Fat tests below standard	0
Fat tests, cream	9
Milk peddlers' licenses issued	62
Storekeepers' licenses issued	312

Miscellaneous.

Work certificates issued to children	17
Number of complaints of nuisances	76
Privy vaults	3
Closets	5
Plumbing	11
Other miscellaneous complaints	57
Number of dead animals removed	642
Cases assigned to health physicians	101
Calls made	224

Medical News

Edited by Arthur J. Bedell, M. D.

ALBANY GUILD FOR THE CARE OF THE SICK.—DEPARTMENT OF VISITING NURSING.—STATISTICS FOR APRIL, 1915.—Number of new cases, 245. Classified as follows: Dispensary patients receiving home care, 16; district cases reported by health physicians, 5; charity cases reported by other physicians, 88; moderate income patients, 99; metropolitan patients, 37; old cases still under treatment, 543; total number of cases under nursing care during month, 788. Classification of diseases for the new cases: Medical, 28; surgical, 8; gynecological, 5; obstetrical under professional care—mothers, 61, infants, 61; throat and nose, 1; infectious diseases in the medical list, 81. Disposition: Removed to hospitals, 14; deaths, 50; discharged cured, 130; improved, 36; unimproved, 4; number of patients still remaining under care, 554.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 2; students in attendance, 5; nurses in attendance, 4; patients carried over from last month, 1; new patients during month, 7; patients discharged, 5; visits by head obstetrician, 1; by attending obstetrician, 2; by students, 49; by nurses, 71; total number of visits for this department, 123.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 1,620; for professional supervision of convalescents, 779; total number of visits, 2,399; visits to pay cases, 896; to charity cases, 724; unrecorded visits, 779; cases reported to the Guild by 3 health physicians, and 47 other physicians; graduate nurses, 7; pupil nurses, 7 on duty; certified nurses, 1.

Dispensary Report.—Number of clinics held, 86; new patients, 176; old patients, 399; total number of patients treated during month, 575. Classification of clinics held: Surgical, 13; nose and throat, 5; eye and ear, 16; skin and genito-urinary, 6; medical, 13; lung, 8; dental, 0; nervous, 2; stomach, 4; children, 11; gynecological, 8.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY.—The annual meeting of the Medical Society of the County of Albany was held at the Elks' Club, Albany, Tuesday, May 18, 1915, at 8:30 P. M. President Dr. James F. Rooney read his address. The following officers were elected:

President, Dr. Frederic C. Conway; Vice-President, Dr. Harry J. Lipes; Secretary, Dr. Eddy S. Haswell; Treasurer, Dr. George W. Papen, Jr.

MEDICAL SOCIETY OF THE COUNTY OF SCHENECTADY.—The regular meeting of the Medical Society of the County of Schenectady was held in the rooms of the Society in the New County Building, Tuesday evening, May 11, 1915, at 8:30 P. M.

Scientific program: "Results of Operative Measures Intended to Relieve Intestinal Stasis," Dr. Earl P. Lothrop, Buffalo, N. Y. "Clinical

Results in Operations on Tumors of the Bladder by Various Operators for the Last Fifteen Years," Dr. James A. Gardner, Buffalo, N. Y.

SARATOGA SPRINGS MEDICAL SOCIETY.—The annual meeting of the Saratoga Springs Medical Society was held at Jim Riley's Lake House, Friday, May 28, 1915, at 9:00 P. M. Dr. Louis F. Bishop of New York read a paper on "The Cure Resort Treatment of Cardiovascular-Renal Disease (Arterio-sclerosis)."

MEMORIAL TO DR. WILLIS G. MACDONALD.—A life size statue of Dr. Willis G. MacDonald, late Professor of Surgery of the Albany Medical College, has been placed in Center Park, Cobleskill. This monument is presented to the village by Dr. MacDonald's father.

AMERICAN MEDICAL ASSOCIATION IN NEW YORK CITY.—The Merchants' Association has started a movement to bring the 1916 meeting of the American Medical Association to New York City. A circular has been issued asking physicians to endorse the movement which, it is said, is favored by the officials of the American Medical Association. Invitations have been extended by all the county societies comprised in the greater city except the New York County Society, in which action has been deferred. Unless invited by the latter the American Medical Association cannot come so the Merchants' Associations asks that the physicians of this county recommend their society to extend an official invitation to the national body.

PHYSICIANS TO BE PAID FOR BIRTH AND DEATH CERTIFICATES.—The Governor has signed the Seely bill providing that municipalities shall pay physicians 25 cents for each birth and each death certificate properly made out and filed. It is estimated that this law will cost New York City about $50,000 a year.

SOCIETIES PROTEST ANTIVACCINATION BILL.—Kings County Medical Society and the New York Medical Society are making efforts to induce Governor Whitman to veto the Tallet-Jones antivaccination bill which has passed both branches of the State Legislature and which proposes to abolish vaccination in cities of less than 50,000 population. It is feared that the passage of the bill will be followed by smallpox epidemics causing a loss of lives which are at present safeguarded.

FOOT AND MOUTH DISEASE.—Figures compiled by the United States Department of Agriculture show that 124,141 animals were slaughtered because of foot and mouth infection between October, 1914, and March 25, 1915.

THE AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTO-LARYNGOLOGY.—The twentieth annual meeting of the American Academy of Ophthalmology and Oto-Laryngology will be held in Chicago October 5th to 7th.

Proctologic Society.—The seventeenth annual meeting of the American Proctologic Society will be held in San Francisco, June 21st and 22d. The subject of the presidential address will be "Retrospect and Prospect."

The American Gynecological Society.—The fortieth annual meeting of the American Gynecological Society was held at the Greenbrier, White Sulphur Springs, W. Va., May 18th to 20th. Dr. Walter P. Manton, Detroit, gave a lecture with lantern demonstration on "Marriage Rites and Obstetrical Practices of the Ancient Romans."

Single Head for Hospitals.—The Sage bill which substitutes for the present State Hospital Commission the appointment of a single State Hospital Commisioner, with a salary of $10,000 a year, passed the Senate April 13th.

Deaf Children.—Anyone interested in a deaf child can obtain free literature explaining approved methods of training deaf children from infancy to school age by writing to the Volta Bureau for the Increase and Diffusion of Knowledge Relating to the Deaf, 1601 Thirty-fifth Street, N. W., Washington, D. C. This literature relates only to the training of deaf children, not to medical treatment nor to the deafness that comes in later life. Age of child and other details are welcome.

United States Civil Service Examination.—The United States Civil Service Commission announces an open competitive examination for physiologist, for men only. From the register of eligibles resulting from this examination certification will be made to fill a vacancy in this position in the Dairy Division, Bureau of Animal Industry, Department of Agriculture, Washington, D. C., at a salary ranging from $2,500 to $3,000 a year, and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

The duties of this position will be to take charge of investigations in the secretion of milk and will involve a general fundamental study of the factors controlling the secretion of milk.

Competitors will not be assembled for examination, but will be rated on the following subjects, which will have the relative weights indicated:

Subjects.	Weights.
1. Education	40
2. Experience	50
3. Publications	10
Total	100

An M. D. degree or a Ph.D. degree in physiological work, and at least four years' subsequent experience in the investigation of physiological problems, are prerequisites for consideration for this position.

Statements as to education and experience are accepted subject to verification.

Applicants must not have reached their fiftieth birthday on the date of the examination.

Under an act of Congress applicants for this position must have been actually domiciled in the State or Territory in which they reside for at least one year previous to the date of the examination. A ten-cent internal revenue stamp must be attached to the county officer's certificate in Form 304.

This examination is open to all men who are citizens of the United States and who meet the requirements.

Persons who meet the requirements and desire this examination should at once apply for Forms 304 and 2095, stating the title of the examination for which the forms are desired, to the United States Civil Service Commission, Washington, D. C.; the Secretary of the United States Civil Service Board, Post-office, Boston, Mass.; Philadelphia, Pa.; Atlanta, Ga.; Cincinnati, Ohio; Chicago, Ill.; St. Paul, Minn.; Seattle, Wash.; San Francisco, Cal.; Customhouse, New York, N. Y.; New Orleans, La.; Honolulu, Haiwaii; Old Customhouse, St. Louis, Mo.; or to the Chairman of the Porto Rican Civil Service Commission, San Juan, P. R. Applications should be properly executed, excluding the medical certificate, and must be filed with the Commission at Washington, with the material required, prior to the hour of closing business on June 8, 1915.

Examination of Candidates for Assistant Surgeon.

Boards of commissioned medical officers will be convened to meet at the Bureau of Public Health Service, 3 "B" Street, S. E., Washington, D. C., and at the Marine Hospitals of Boston, Mass., New York, N. Y., Chicago, Ill., St. Louis, Mo., Louisville, Ky., New Orleans, La., and San Francisco, Cal., on Monday, June 21, 1915, at 10 o'clock A. M., for the purpose of examining candidates for admission to the grade of assistant surgeon in the Public Health Service, when applications for examination at these stations are received in the Bureau.

Candidates must be between 23 and 32 years of age, graduates of a reputable medical college, and must furnish testimonials from two responsible persons as to their professional and moral character. Service in hospitals for the insane or experience in the detection of mental diseases will be considered and credit given in the examination. Candidates must have had one year's hospital experience or two years' professional work.

Candidates must be not less than 5 feet 4 inches, nor more than 6 feet 2 inches in height, with relatively corresponding weights.

The following is the usual order of the examinations: 1, Physical; 2, Oral; 3, Written; 4, Clinical.

In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify them for service in any climate and that they will serve wherever assigned to duty.

The examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercise consists of examination in the various branches of medicine, surgery, and hygiene.

The oral examination includes subjects of preliminary education, history, literature, and natural sciences.

The clinical examination is conducted at a hospital.

The examination usually covers a period of about ten days.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order. They will receive early appointments.

After four years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon.

Assistant surgeons receive $2,000, passed assistant surgeons $2,400, surgeons $3,000, senior surgeons $3,500, and assistant surgeon-generals $4,000 a year. When quarters are not provided, commutation at the rate of $30, $40, and $50 a month, acording to the grade, is allowed.

All grades receive longevity pay, 10 per cent in addition to the regular salary for every five years up to 40 per cent after twenty years' service.

The tenure of office is permanent. Officers traveling under orders are allowed actual expenses.

For invitation to appear before the board of examiners, address "Surgeon-General, Public Health Service, Washington, D. C."

PERSONALS.—Dr. CASSIUS P. BYINGTON (A. M. C. '82) is practising at Ossining, N. Y.

—Dr. CLARENCE L. SICARD (A. M. C. '01) has opened a private home sanatorium for nervous diseases, alcohol and drug addiction, chronic invalidism and convalescence at 196 Spring St., Amsterdam, N. Y.

—Dr. JOHN F. SOUTHWELL (A. M. C. '10), Albany, has removed from 278 Lark St. to 123 State St.

—Dr. CHARLES A. PERRY (A. M. C. '14) is engaged in active practice at West Leyden, N. Y.

DIED.—Dr. JOHN O. NILES (A. M. C. '50), acting assistant surgeon in the army during the Civil War, died at his home in Brooklyn, April 18, 1915, aged 88.

—Dr. HORATIO GILBERT (A. M. C. '67), hospital steward of the One Hundred and Fifty-seventh New York Volunteer Infantry during the

Civil War, died in the Soldiers' Home Hospital, Bath, N. Y., April 25, 1915, aged 75.

—Dr. JOHN V. E. WINNIE (A. M. C. '67), a member of the Medical Society of the State of New York, and health officer of the village of Sidney, N. Y., for fifteen years, died at his home April 26, 1915, aged 71.

—Dr. EDWARD F. SHEEHAN (A. M. C. '88), a member of the Medical Society of the State of New York, physician to the Ossining, N. Y., hospital, and during two administrations a member of the staff of the State Comptroller, died at his home in Ossining, April 19, 1915, from heart disease, aged 53.

—Dr. GEORGE G. LEMPE (A. M. C. '88), Albany, N. Y., died at his home, 702 Madison Ave., Albany, after a few weeks' illness, May 17, 1915.

In Memoriam

GEORGE GUSTAVE LEMPE, M. D.

Dr. GEORGE GUSTAVE LEMPE, a widely known and active practitioner and surgeon, died at his home, 702 Madison avenue, Albany, May 17, 1915, after an illness of two months, of Bright's disease. In March Dr. LEMPE sprained his right ankle by a fall on the sidewalk and the constitutional symptoms followed.

Dr. LEMPE was fifty years old. He was born at Lansingburg in December, 1865. He attended the public schools for one year, after which he went to Hanover, Germany, where he attended the Royal gymnasium and later the University of Goettingen, from which he received a degree in 1882.

He returned to America and became instructor in Latin and German in Harvard University. Later he became a student at the Harvard Medical School. Then he transferred to the Albany Medical College, from which he received the degree of doctor of medicine in 1888. He then took post graduate work at the Universities of Berne, Breslau, Vienna, Munich and Wuerzberg, Germany.

Returning to America he became associated with the late Dr. John Swinburne of Albany. In 1896 he became instructor in anatomy in the Albany Medical College; in 1906 he was made lecturer in anatomy; in 1912 he was made lecturer in minor surgery, which position he held at the time of his death. He was also lecturer in anatomy and surgery in the Nurses' Training School of the Albany Hospital.

In 1889 Dr. LEMPE became attending surgeon to the Homeopathic Hospital, which position he held until 1896, when he became assistant attendant surgeon at the Albany Hospital. At the time of his death he was consulting surgeon at the Kingston Hospital, Kingston. He was surgeon of the Third Cavalry Squadron, N. G. N. Y., with the rank of captain, and was detailed to "B" troop. He was a member of the

Albany County Medical Society and served as president during 1906-1908. He was a member of the New York State Medical Society, a fellow of the American Medical Association, member of the American Society of Anatomists, associate member of the Medical Society of the greater city of New York, and corresponding member of the Medical Society of London and the Harvard Association of Eastern New York. He was also a member of Albany Lodge No. 49, B. P. O. E. He was a contributor of many articles on surgery to the leading medical journals of the country.

Dr. LEMPE was a member of the Albany Medical College Alumni Association, Phi Sigma Kappa fraternity, the Fort Orange Club, the University Club, and the Albany Chamber of Commerce. He was president of the Albany Automobile Club, of the German Hall Association, of the German Hospital Association, of the Albany Maennerchoir Singing Society, and a Past Master of Guttenberg Lodge 737, Free and Accepted Masons, a member of Capital City Chapter 242, Royal Arch Masons, DeWitt Clinton Council 22, Royal and Select Masters, Temple Commandery 2, Knights Templar, and Kaa-Rheu-Vahn Grotto 20, Mystic Order of the Veiled Prophets of the Enchanted Realm.

Dr. LEMPE spoke English, French and German fluently and wrote Latin and Greek. He is survived by his wife, Mrs. Meta Lempe, and his father, George H. Lempe, who live at 708 Madison avenue; two brothers, William G. Lempe of Troy, and Frederick Lempe of Gloversville, and one sister, Mrs. Marie Clempson of Troy.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

Skin Grafting. By LEONARD FREEMAN, B. S., M. A., M. D., Professor of Surgery in the Medical Department of the University of Colorado, Surgeon to St. Joseph's Hospital, the National Jewish Hospital and the City Hospital, Denver, Colorado. St. Louis, C. V. Mosby Co., 1912.

This is a small book of 139 pages and 24 illustrations, but covers a vast amount of material in such a practical and scientific manner that it should be of value to all physicians and surgeons. The history of skin grafting is placed before us in a most interesting manner and tells us things which are not only instructive but amusing, regarding ancient surgery as applied to skin grafting. The author discusses the possibility of transferring the various diseases from one person to another and describes well and in detail the methods of Reverdin. Thiersch, Wolfe, Krause and Hirschberg. An interesting chapter is that one devoted to "Grafting from animals." The technique of grafting under local anaesthesia is instructive.

An extremely valuable part of the work is the extensive bibliography which is well indexed. The book is brief but to the point—explanative and well written. Its simple style should appeal to all. J. L. D.

Diseases of the Rectum and Pelvic Colon. By MARTIN L. BODKIN, M. D., New York, Rectal Surgeon, St. Mary's Hospital, the Williamsburgh Hospital and the Howard Orphan Asylum; Late Rectal Surgeon, Bushwick Hospital. New York, E. B. Treat and Co., 1913.

This book is divided into 29 chapters and contains 91 illustrations. Chapter I describes in a rather brief but concise manner the anatomy and physiology of the anal canal, the rectum and the sigmoid flexure. Chapters II, III, IV and V take up in a general way the methods of routine examinations including the examination of the patient from the standpoint of history, physical examination and examination of the stools, etc. The diagnosis is summed up in a few words, which is perhaps open to criticism inasmuch as atypical cases are entirely overlooked.

A description of the various diseases is quite complete, embracing the etiology, symptoms, diagnosis and treatment. From the author's statements it may easily be seen that he sees but few of the many advantages derived from the Whitehead operation. The author's statements are too severe regarding this procedure, as may be attested to by the following statement which he makes regarding the Whitehead operation. "The operation has never become popular in England or America except in exceptional cases where the ligation or clamp and cautery operation could not be substituted. The complications and sequelae are so numerous and the operation so difficult, even under most favorable circumstances, that it is justly disapproved by most surgeons." A number of surgical procedures for the treatment of anal fistula are described. It is unfortunate that the author did not mention Elting's operation for that condition.

The book is well written and the illustrations are numerous and explanative. The text is interesting and instructive reading as a whole. The book is recommended to both the general practitioner and surgeon.

J. L. D.

A Practical Text-Book of Infection, Immunity and Specific Therapy, with special reference to immunologic technic. By JOHN A. KOLMER, M. D., Instructor of Experimental Pathology, University of Pennsylvania, with an introduction by ALLEN J. SMITH, M. D., Professor of Pathology, University of Pennsylvania. Octavo of 899 pages with 143 original illustrations, 43 in colors. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, $6.00 net; half morocco, $7.50 net.

The extent to which the investigations of infection and immunity have gone, and their importance in practical medicine, are suggested by this comprehensive volume. Each successive contribution brings nearer the application of the principles of scientific medicine in the treatment of disease, and the work of the laboratory, which, for a time, appeared to be developing into a separate and allied science, is again approaching that of the clinic. Dr. Kolmer has emphasized this fact. The technique is often elaborate, much of it too complicated for the practitioner, but the direct application of results is necessary. The purpose of the book is:

1. To give to practitioners and students of medicine a connected and concise account of our present knowledge regarding the manner in which the body may become infected, and the method, in turn, by which the organism serves to protect itself against infection, or strives to overcome the infection if it should occur, and also to present a practical application of this knowledge to the diagnosis, prevention and treatment of disease.
2. To give to physicians engaged in laboratory work and special workers in this field a book to serve as a guide to the various immunologic methods.
3. To outline a laboratory course in experimental infection and immunity for students of medicine and those especially interested in these branches.

The four main Parts deal respectively with: (I) "General Immunologic Technic," (II) "Principles of Infection," (III) "Principles of Immunity and Special Immunologic Technic," and (IV) "Applied Immunity in the Prophylaxis, Diagnosis and Treatment of Disease—Specific Therapy." There is appended a section on "Experimental Infection and Immunity."

The phraseology is clear and definitions are concise. The question remains, as Dr. Smith states in his introduction, as to how far the vital subject of immunology may be followed by the undergraduate medical student. It is hardly possible to follow his suggestion of an added year to the curriculum, but it may be hoped that the rational method of approaching disease may supplant a part, at least, of empirical medicine, and that immunology may take the place of less exact therapeusis. To this desired end Dr. Kolmer's book points the way.

Mechanical Vibration: Its Physiological Application in Therapeutics. By M. L. H. Arnold Snow, M. D., Associate Editor of the *Journal of Advanced Therapeutics.* Published by The Scientific Authors' Publishing Co. New York, 1912. 476 pages; 12 plates; many illustrations. Cloth, $3.50.

In the preface the author says: "This work is written to call attention to the fundamental principles of mechanical vibration, the understanding of which enhances its therapeutics not only in the present knowledge of the subject, but looking to the important field which will be opened to it in the future."

The first chapter is devoted to the history and development of mechanical vibration, beginning with the "Shoshruta" of the Hindoos and ending with the work of Abrams' in "Spondylotherapy." After a description of the different kinds of apparatus, old and new, and the various methods of using mechanical vibration, the author describes the physiologic effects, classifying them as Mechanical, Chemical, Thermal, Physical, Metabolic, and Reflex.

The chapter on diagnosis is particularly interesting and contains many tables by the author, Arnold and Abrams, showing the relation between the spinal nerves and the viscera, muscles and nerves; and the relation between spinal tenderness and pathologic conditions generally. In dealing with the subject of diagnosis, the author refers in her description of methods not only to the "Vibrator" but also to the sinusoidal current, the static wave current, the static spark, plexor with rubber pleximeter, pneumatic hammer and electro-concussor, stating that some reflexes are best excited by one and some by another of these means.

Later chapters deal with the relation of mechanical vibration to, and its use in pathologic conditions of, the heart, blood vessels, ductless glands, lymphatics, and the respiratory, muscular, nervous and digestive systems.

To one at all interested in mechanical vibration as a therapeutic measure, or in the newer ideas as to the relation of the spinal nerve to pathologic conditions, this excellent work will prove most interesting and instructive. W. G. L.

SURGICAL PATHOLOGY.

Edited by George E. Beilby, M. D.

The Experimental Production of Lesions, Erosions, and Acute Ulcers in the Duodenal Mucosa of Dogs by Repeated Injections of Ephinephrin.

G. A. Friedman. *The Journal of Medical Research, March, 1915, Vol. XXXII, No. 1, page 95.*

The author on previous occasions has pointed out the value of polycythemia or polyglobulia for the diagnosis of non-bleeding duodenal ulcer in man. Briefly recapitulated, his work seems to demonstrate that while in duodenal ulcer the condition of polyglobulia is frequent and of anemia rare, just the reverse occurs in gastric ulcer, thus, of eighteen operatively demonstrated cases of duodenal ulcer, polycythemia was found in fifteen, while in twelve cases of gastric ulcer polycythemia was noted only once. Seeing, therefore, a possible connecting link between the polyglobulias found in duodenal ulcer and the experimental polyglobulias found after injections of adrenalin on the one hand, and in the tendency of adrenalin to affect tissues with sympathetic innervation on the other, Friedman set up the working hypothesis that the initial lesion of duodenal ulcer may be caused by an excessive secretion of the adrenals. With this object in view he undertook the following experiments which consisted of repeated injections of adrenalin in dogs. The dogs were injected between two and three P. M. almost daily with occasional intervals. No food was given in the morning of the days when the injections were performed. The injections were kept up for one to two weeks, being made either into the vein or into the muscle. The usual adrenalin hydrochloride solution (1:1000) of Parke, Davis was used. The single dose was not less than one cubic centimeter of the solution, or one milligram of adrenalin and did not exceed three cubic centimeters, or three milligrams, by either of the methods. The autopsy showed lesions, erosions, and ulcerations in the duodenum of eleven dogs out of twelve experimented upon. This the author believes is certainly more than coincident.

Friedman was led to publish this preliminary study inasmuch as a careful search in the literature had not revealed to him any mention of selective action of adrenalin upon the duodenal mucosa, and while the material as yet is too small to admit of any definite conclusions, he feels that this work may have an important bearing upon the pathogenesis of the duodenal ulcer in man.

Differential Diagnosis and Indications for Treatment of Tumors of the Neck.

OLIVER C. SMITH. *The Boston Medical and Surgical Journal, February 11, 1915, Vol. CLXXII, No. 6, page 208.*

Because, as the author states, no region of the human body is more subject to inflammatory involvements and growths than the neck, unless it is the abdomen, the pathology of these lesions has a wide range and their diagnosis is at times impossible without the aid of sections and the microscope. It is self-apparent that correct diagnosis is extremely important and therefore the author has given a rather exhaustive and comprehensive view of the more common lesions that affect this particular location of the body. In his discussion he uses the word "tumor" in its broad sense as including all swellings, acute and chronic, as well as true neoplasms. He classifies the lesions in this area as follows:

TUMORS OF THE NECK.

A. Inflammatory.
  a. Acute:
    1. Parotitis (mumps).
    2. Submaxillary adenitis.
    3. Cervical lymph adenitis.
    4. Furunculosis and carbuncle.
    5. Anthrax (malignant pustule).
    6. Actinomycosis.
    7. Echinococcus cyst.
  b. Chronic:
    8. Chronic lymph adenitis.
    9. Tuberculosis.
    10 Syphilis.
    11. Hodgkin's disease.
    12. Mikulicz's disease.

B. Embryologic Malformations.
    13. Branchial cysts.
    14. Tumor of thyroglossal duct.
C. Neoplastic.
  a. Benign:
    15. Lipoma.
    16. Fibroma.
    17. Chrondroma.
    18. Osteoma.
    19. Sebaceous cyst (wen).
    20. Angioma.
      a. Hemangioma.
      b. Lymphangioma or hydrocele.
    21. Hygroma.
    22. Teratoma.
      a. Dermoid cysts.
      b. Mixed tumors of salivary glands.
  b. Malignant:
    23. Carcinoma and epithelioma.
    24. Sarcoma.
    25. Lymphosarcoma.
D. Tumors of Special Organs.
  a. Thyroid.
    26. Physiologic hypertrophy of menstruation and pregnancy.
    27. Colloid adenoma (goitre) with or without cysts.
    28. Parenchymatous hyperplasia.
    29. Foetal adenoma.
    30. Malignant disease.
      a. Carcinoma.
      b. Sarcoma.
  b. Carotid body (31).
  c. Aneurysm of aorta and carotids (32).
  d. Tumors of larynx (33).

Renal Cancer Associated with Renal Stone.

JOHN *R.* CORYELL. *Bulletin of The Johns Hopkins Hospital, April, 1915. Vol. XXVI, No. 290, page 93.*

The author's object in this paper has been to record the macroscopic and microscopic findings in kidneys, the seat of both stone and cancer. The study covers all cases of renal cancer and renal stone from which tissue was removed in the Mayo Clinic from January 1, 1905, to July 1, 1914, a total of 145 cases, of which 131 were of stone only, 5 of cancer only, and 9 of cancer associated with stone. His method of procedure has been as follows:

1. Review of the primary pathologic diagnosis which was made on

frozen sections stained with Unna's polychrome methylen blue in the diagnostic laboratory immediately after removal of the organ.

2. Study of the gross specimen.

3. Microscopic examination of sections from cortex, medulla and pelvis of specimens kept in 10 per cent. formalin, frozen and stained with hematoxylin and eosin; also of serial paraffin sections of many specimens stained with Sudan III and Scharlacher, and with Weigert and Van Gieson.

The author's article is well illustrated by photographs of tissues and microscopical sections, and he presents a very exhaustive review of the literature. In conclusion he presents the following summary:

1. Renal epithelium (tubular and pelvic) not infrequently regenerates.

2. Renal tubules regenerate not infrequently as a whole.

3. The stages of development of renal epithelium under the influence of or as a result of irritation which is constant and prolonged are (1) normal, (2) inflammatory, (3) hyperplastic, (4) neoplastic (which may be either benign or malignant). In the kidney there seems to be no distinct line of demarcation between certain stages or phases of a chronic-inflammatory process and neoplastic formation, and it is impossible to say where normal processes cease and neoplastic processes begin.

4. The preparatory phenomena of renal new-growth seem to take place not in the area actually irritated, *i. e.,* not in the area which shows actual inflammatory reaction, but just beyond the same.

5. Even if heredity plays the same rôle in human cancer as it seems to play in mouse cancer, chronic irritation in the kidney is still of very great importance, in that it determines the location of the neoplasm.

6. There is, at times, an attempt on the part of the neoplasm to mimic the structure of the kidney by a columnar arrangement of cells and the formation of a lumen.

7. Renal cancer develops from the epithelium, both of the pelvis and of the tubules.

8. In all specimens studied, the kidney in some portion showed an inflammatory reaction. The destruction of the renal substance varied in degree and was brought about by interstitial or parenchymatous changes or both; and suppuration was of frequent occurrence.

9. The epithelial lining of renal tubules may, under the influence of renal stone, (1) necrose, (2) form cysts, or (3) become malignant.

10. After having seen the gradual changes from normal tissue to inflammatory, from inflammatory to hyperplastic, and from hyperplastic to neoplastic, it appears probable that the chronic irritation brought on by the stones was the direct cause of the cancer.

11. In all the cases of renal cancer associated with renal stone, a large, light, fat-containing cell is found, sometimes singly, sometimes arranged in groups, and sometimes in definite columns. It has its origin in the tubules of the kidney. Further study will be made of this cell.

12. Of the total number of kidneys with cancer removed at the Mayo Clinic, 64 + per cent. were associated with stones and 35 + per cent. were without stones.

Observations on Experimental Typhoid Infection of the Gall Bladder in the Rabbit.

Journal of Experimental Medicine, December, 1914, Vol. XX, No. 6, page 573.

In recent years the question of immunity following antityphoid vaccination, the typhoid carrier problem, and the possibilities of chemotherapy have restimulated the investigation of experimental typhoid infections in lower animals. Therefore, the author in this paper has endeavored to consider the following subjects.

1. Pathogenicity of a living sensitized vaccine.
2. Pathogenicity of first transplant from a living sensitized vaccine.
3. The regular production of lesions.
4. The gall bladder lesion as a test of immunity.
5. The curative effects of vaccines.
6. The practical bearing of experimental work.

Altogether, ninety-seven animals were used and forty gall bladder lesions observed.

The author shows by his experiment that typhoid bacilli can be isolated from the organs for some time after injection but that the gall bladder lesion is the most persistent source. After intravenous injection the gall bladder apparently becomes infected by way of the blood stream as well as from the bile. The result of his experiments may be summarized as follows:

1. Besredka's living sensitized vaccine, given intravenously, does not produce a typhoid lesion of the gall bladder in the rabbit.

2. The first transplant of this vaccine is capable of producing this lesion. Hence this vaccine is not entirely safe to handle.

3. Regular infections of the gall bladder have not been produced by carrying a known pathogenic strain on rabbit blood agar, by successive passage through animals, or by the use of freshly isolated strains.

4. No evidence could be demonstrated in the rabbit of the immunity produced in man by vaccination with a whole killed vaccine.

5. Vaccine treatment did not cure the gall bladder lesion.

6. With the present methods of producing infections in the chimpanzee and the rabbit, neither of these animals is suitable for deciding the problems of the immunization of man by vaccines. These problems must be settled, as some of them already have been settled, by actual experience with large numbers of men kept under close observation.

Colloidal Silver with Lecithin, in the Treatment of Malignant Tumors.

G. L. Rohdenburg. *Journal of Medical Research, January, 1915, Vol. XXXI, No. 3, page 331.*

Ten cases of absolutely inoperable malignant tumor in man were treated as part of this investigation. All diagnoses were based on microscopic examination of the tumors. The mixture which the author made use of is prepared as follows: One gram of commercial colloidal silver was rubbed up with three grams of Merck's lecithin, about five drops of water being added to facilitate the process, and the ingredients being mixed together until a perfectly smooth, uniformly colored mass, free from grit, was obtained. This was then dissolved in thirty cubic centimeters of a .25 per cent. aqueous carbolic acid solution and the fluid was filtered and sterilized by fractional sterilization. This mixture was given by intramuscular or intravenous injection, the average dose being seven cubic centimeters repeated every third or fifth day. No toxic phenomena were observed, except a rise of temperature varying from one to three degrees and lasting about six hours. In judging the results, the standard of Weil was adopted, namely, actual decrease in the size of the tumor not referable to the ordinary course of the disease. The results were the same as with other methods; that is, the pain was relieved and the patients felt better, both purely psychic changes. There was no question that the clinical appearance of the patients was improved; some even gained in weight, no doubt due to a psychic stimulation of appetite. The ulcerating surfaces of some of the growths cleaned up, probably because of the greater surgical cleanliness afforded patients under constant observation and in a hospital. All of these changes were so deceptive that those who had clinical charge of some of the cases were certain that they were benefited. Nevertheless, all the tumors pursued their usual course, grew steadily, as shown by careful measurements, and finally all the patients died, demonstrating thereby the need for extreme caution in reporting the results of therapeutic efforts to affect malignant growths.

A Comparison of Autoplastic and Homeoplastic Transplantation of Thyroid Tissue in the Guinea Pig.

CORA HESSELBERG. *The Journal of Experimental Medicine, February, 1915, Vol. XXI, No. 2, page 164.*

The author's purpose in this work was to trace the fate of the thyroid gland after homeoplastic transplantation, and to compare it with the behavior of this tissue after autoplastic transplantation. In these experiments the author makes use of guinea pigs working always on two animals and the grafts were placed in the neck and abdominal region of the animals, through small skin incisions. The author's series includes 75 animals with more than 140 grafts. The animals were killed at intervals of from one day up to 52 days after the transplantation, and the transplanted tissue examined microscopically, and in a general way the results of the author's findings were as follows:

For a short period of time after operation no difference was seen in the behavior of the thyroid after auto- and homeotransplantation. Very soon, however, destruction of follicles began to take place in the homeografts. This destruction was not caused by a direct primary disintegration or solution of follicles, but depended on the destructive activity of (1) the lymphocytes, and (2) of the connective tissue of the host tissue. The former invaded the follicles and destroyed them directly; the latter grew into the homeografts in larger quantity than into the autografts. In the former it soon became fibrous and hyaline; in the latter it remained cellular. The fibrous connective tissue surrounded and compressed and thus destroyed the follicles. In some homeografts destruction by means of lymphocytes, in other by connective tissue, preponderated. The rapidity with which the destruction took place in different homeotransplants also varied. A much better blood vessel supply developed in the autograft than in the homeograft.

Clinical and Experimental Studies Upon the Injection of Alcohol into the Gasserian Ganglion for the Relief of Trigeminal Neuralgia.

CHARLES METCALFE BYRNES. *Bulletin of The Johns Hopkins Hospital, January, 1915, Vol. XXVI, No. 287, page 1.*

These studies comprise the clinical experience of the author in fourteen cases treated at the Johns Hopkins Hospital, and also a series of experiments made in the Hunterian Laboratory of the Johns Hopkins Medical School, in which the effect of injections of the Gasserian Ganglion in lower animals was studied. The result of the author's experiments and practical use of the method may be summarized as follows:

1. In the treatment of trigeminal neuralgia, a single successful injection of alcohol into the Gasserian ganglion is followed by immediate relief of pain and all the symptoms indicative of its complete physiological destruction.

2. Although a general anesthetic is not administered, the painfulness of the injection is not unbearable or greater than that experienced in making deep intraneural injections.

3. In experienced hands, this form of treatment is without serious risk, and no fatalities have been recorded as a direct result of the injection.

4. In spite of the contentions of Alexander and Unger, injections in man by exposure of the ganglion appear to be unwarranted and lacking in judgment, except in rare cases in which this slight saving of time may determine the immediate result during the exposure of the ganglion. It is conceivable that in performing the subtemporal operation for removal of the ganglion, emergencies might arise which would demand prompt closure of the incision, or prevent further approach to the ganglion. Under these conditions, if the ganglion is in view or accessible, direct injection might be practised; otherwise the original operation for removal or avulsion of the root should be employed.

5. If deep neural injections have been unsuccessful, and repeated attempts to inject the ganglion by the subcutaneous method have failed, an effort might be made to inject through the exposed foramen ovale before resorting to the subtemporal operation for removal.

6. It has been demonstrated, by fractional injection, that the extent

of destruction may be, in a measure, limited to that portion of the ganglion from which the affected nerve trunk originates; and that not infrequently the corneal fibres can be spared.

7. From the distribution of corneal anesthesia, following partial injections of the Gasserian ganglion, it appears that the upper and lower halves of the cornea receive separate innervation.

8. In cases of bilateral trigeminal neuralgia, injection of the ganglion possesses distinct advantages over other methods of radical treatment. Since anatomical continuity is not actually destroyed and the motor nucleus is not directly affected, conditions are most favorable for recovery of motor function; while sensation should be permanently lost if the ganglion is completely destroyed. Thus, by allowing sufficient time for regeneration in the motor root bilateral ganglionolysis might be safely practiced.

9. Clinical observations have been too recent to furnish reliable information as to the permanency of relief after ganglionic injections, and experimental studies appear to indicate that it is not probable that the ganglion can be completely destroyed by a single injection of alcohol. It is my opinion, however, that by repeated injections of the ganglion its complete destruction may finally be accomplished.

Further Investigations on the Mode of Action of Substances Inhibiting Tumor Growth and on Immunization against these Substances.

MOYER S. FLEISHER and LEO LOEB. *The Journal of Experimental Medicine, February, 1915, Vol. XXI, No. 2, page 155.*

This study is based upon a large series of experiments and is confirmatory of results obtained in previous investigations made by the authors. In their previous paper they reported that combinations of colloidal copper and hirudin and of colloidal copper and nucleoproteid were much more effective than either of these substances alone, and that these combinations not only caused an inhibition of the tumor growth but also retrogression of a considerable number of tumors. They also found that the combination of colloidal copper and hirudin was more toxic than either substance given alone.

The authors conclude that it is possible to increase markedly the effect of substances inhibiting tumor growth by using certain combinations of these substances which, when given alone, have some effect on tumor growth.

That immunity acquired against the effect of these substances depends partly upon an active immunization of the tumor cells themselves against the action of these substances, and this immunity is transmitted to the following generations of tumor cells.

That the immunity against the substances inhibiting tumor growth is, as far as they have investigated the problem, specific.

That their later experiments provide a more secure basis for the additional and more general conclusions which they mentioned tentatively in their previous paper.

Vol. xxxvi JULY, 1915 No. 7

ALBANY
MEDICAL ANNALS

Original Communications

ASSOCIATION OF THE ALUMNI OF THE ALBANY MEDICAL COLLEGE—FORTY-SECOND ANNUAL MEETING.

The forty-second annual meeting of the Association of the Alumni of the Albany Medical College was held in the amphitheatre on Tuesday, May 25, 1915. The usual informal reception was held in the college library, where photographs were exhibited, and greetings exchanged between the hours of 9 and 11 A. M. The meeting was called to order by the President, Dr. Herman L. Chase ('75) of Palmyra, N. Y., at eleven o'clock.

The following named members of the Association, with invited guests, students of the college, and others interested, were present: Addison W. Goodale ('58) ; Alfred B. Huested ('63) ; D. S. Allen, Thomas D. Crothers, George G. Whitaker ('65) ; Charles F. Scattergood ('68) ; Daniel C. Case, Willis G. Tucker ('70) ; G. L. Ullman ('71) ; Daniel H. Cook ('73) ; H. L. Chase, John H. Day, J. W. Houser ('75) ; Mark M. Lown ('77) ; J. H. Cotter, Earl D. Fuller, Charles A. Ingraham ('78) ; Wallace E. Deitz, George H. Houghton, F. A. Palmer ('82) ; Robert Babcock, Luman B. Rulison ('84) ; I. S. Edsall, Martin MacHarg, James P. Marsh, A. E. Moody, G. M. Stillman ('85) ; John A. Robson ('86) ; Andrew MacFarlane, Charles H. Moore ('87) ; J. Montgomery Mosher, William Van Doren ('89) ; A. G. Root ('90) ; W. Irving Goewey, William G. Lewi, Leo H. Neuman ('92) ; C. H. Herrick, Thomas W. Jenkins, Thomas A. Ryan, P. G. Waller ('93) ; E. H. Goodfellow, Arthur Sautter ('94) ; J. M. Allen, Charles S. Butler, Alfred Desrochers, Frank H. Hurst, A. M. Johnson, E. N. K. Mears, Howard W. Murphy, Charles L. Myers, C. H. Turner, William J. Wansboro ('95) ; William L. Fodder, H. Judson Lipes ('97) ; Raymond G. Edmans, James F. Rooney, W. J. Swart, A. H. Traver ('98) ;

Christian G. Hacker, Eugene E. Hinman, Joseph A. Lanahan ('99); Luther Emerick ('00); Arthur J. Bedell, Gerald Griffin ('01); James N. Vander Veer ('03); Bransen K. DeVoe, Joseph N. B. Garlick ('04); C. W. Louis Hacker, Chester A. Hemstreet, Thurman A. Hull, F. J. Hurley, Matthew J. Keough, George W. Papen, Jr., William G. Rommel, Arthur W. Schuyler, Hamilton M. Southworth, C. W. Stratton, E. H. Vines, George Walrath, R. C. Waterbury, Alfred R. Warner ('05); T. F. Doescher, Clinton B. Hawn, Walter A. Reynolds ('06); J. L. Bendell, Tiffany Lawyer ('07); John J. A. Lyons ('08); Morris Bellin, Harry H. Drake, Eddy S. Haswell ('09); Philip C. Hacker, Charles Frederick Myers ('10); Elwin W. Hannock ('11); Donald A. MacDuffie, Clarence E. Mullens ('12); J. Leonard Byrnes, Rufus B. Crain, H. S. Howard, E. H. Ormsby, Frank J. Williams ('13); D. W. Beard, Edward J. Buxbaum, William P. Howard, Harry V. Judge, H. D. Parkhurst, Robert Reid, Jr., Fred D. Wilson ('14); P. Huntley Austin, Hugh S. Chidester, Stephen H. Curtis, Frank E. Dean, Jr., Guy Fish, Leon W. Green, W. L. Grogan, Raoul A. Herbert, John C. Heslin, Stanley M. King, James S. Lyons, William B. McKeon, Charles L. Nichols, William P. Sweeny, Archibald A. Walker ('15).

On motion of Dr. MacFarlane, the reading of the minutes of the last annual meeting was dispensed with and the minutes were approved as printed in the ALBANY MEDICAL ANNALS.

The President introduced Professor La Salle Archambault, who delivered the following address of welcome on behalf of the faculty:

ADDRESS OF WELCOME.

DR. ARCHAMBAULT'S ADDRESS.

Mr. President, Fellow-Alumni and Gentlemen: For many years it has been the custom of the Faculty of the Albany Medical College to officially greet you at this your annual meeting and to welcome you back to your Alma Mater. This year, this honorable duty has devolved upon me and I am profoundly grateful for the opportunity and privilege of addressing you on this occasion. On behalf of the Faculty, I extend to each and all of you a very hearty and cordial welcome. I sincerely trust that we may count upon your presence both at the graduating exercises this afternoon and at the annual banquet this evening.

For the alumni of this college, Commencement Day always retains a certain physiognomy which serves to distinguish it from other days and to identify it as one of the great days of the year. As you return to this city where you have passed the most crowded years of your ambitious youth, and as you re-enter this old amphitheatre where you have spent so many hours of diligent and arduous toil, you instinctively dismiss the cares and worries of the present and gladly live over again, in a figurative sense, the more trifling anxieties of the past. At the same time, not unmindful of your duties as alumni of the college, you note carefully whatever changes have occurred, you come in contact with the members of the graduating class and form some opinion of the standard maintained in the teaching methods of the college, and you are anxious to know what steps are being taken to promote the further growth, efficiency, and prosperity of your Alma Mater. It is only natural and proper that you should exhibit this interest in the college and it is equally fitting and just that its custodians should transmit to you a faithful account of their endeavors and acomplishments.

The life history of an institution, and more especially perhaps of a medical school, is comparable in a certain measure with that of a nation, or republic. The responsibility for its welfare and advancement rests upon the shoulders of a few individuals who together constitute the executive or governing body, and while all the members of this body have the best interest of the institution at heart, all may not have the same notions as regards the best means of ensuring a wise and successful administration. Divergences of opinion are bound to arise, the aims and purposes of some are apt to be misconstrued or misinterpreted by others, and thus occasional clashes and petty strifes interrupt, now and then, the usually serene course of the common effort. Such feuds have occurred since the beginning of the world in all spheres of human activity and, while they are always unfortunate and regrettable, they not infrequently prove beneficial, particularly if the storm can be dissipated by a happy exchange of concessions and by reciprocal expressions of mutual trust and confidence. Doubtless you are aware that the equanimity of your Alma Mater has been occasionally disturbed in the past by just such diminutive explosions, but until now it cannot be said that the integrity of the college has been thereby compromised in the least, or that its traditions have been either outraged or violated. On the contrary, unity of purpose and collective solidarity on the part of the Faculty have enabled this school to take and retain rank among reputable institutions of medicine.

For three quarters of a century the Albany Medical College, the second oldest medical school in the State of New York, has supplied the community at large with efficient and competent practitioners of medicine, as well as with upright and honorable citizens. The graduates of this school are now scattered all over the States of the Union and everywhere they have established an enviable reputation and gained the respect and confidence of their fellow-men. This is abundant evidence of the school's legitimate right to exist and the best proof that can be offered that it has fulfilled its duties towards mankind. It is nothing short of marvelous that the Albany Medical College should have managed to achieve so glorious a record in the face of the almost unsurmountable difficulties which it has had to countenance since its very beginning. As you all know, lack of endowment has been from the start a constant menace to the very existence of this school. Up to the present time practically, this terrible disadvantage has been greatly minimized thanks to the unfailing devotion, the ceaseless labor and the great personal sacrifices of the teaching staff of the college. Every fibre has been strained in order to keep abreast of the times and every requirement of the State has been scrupulously and accurately complied with. It has become more and more evident, however, that with the ever-increasing exigencies of modern teaching methods, even the most heroic sacrifices on the part of the teachers of this college would no longer suffice to maintain its proper status among scientific institutions. The struggle has indeed rapidly become too unequal to continue very long and the best proof of this is hown in the deplorably high percentage of failures at the State Board examination in recent years. Hence, for several years already your attention has been called to the great needs of the college, to the necessity of more modern and elaborately equipped buildings, and above all to the importance of securing the services of trained and salaried teachers in certain departments. All this was but a frank avowal of our dire financial straits and an urgent appeal for help.

Perhaps have you been insufficiently impressed with the gravity of the danger, but certain it is that a timely and generous response to the demands of your Alma Mater would have done much towards averting the lamentable crisis which has since confronted us all. A few years ago, it is true, a definite start was made in the way of improving the situation of the college, a site for new buildings was secured and a certain sum, known as the MacDonald Memorial Fund, was raised and set aside as the nucleus of further contributions, but the amount thus realized was far too meagre to warrant any immediate step of real significance or to meet adequately even the most stringent needs of the college. Unfortunately, hardly had this ray of sunshine pierced the cloudy horizon before another serious complication arose—the practical dismemberment of the Faculty a year ago. As you know, several members of the Faculty resigned at that time; the majority of them did so simply as a matter of course, because they felt that they had served a sufficient length of time and given the full measure of their energies to the support of the college. Others resigned because they were in disagreement with certain features affecting the existing plan of administration, because certain conditions which they deemed desirable could not be realized right then and there, and foremost among these conditions was the more substantial affiliation of the college with Union University, a stipulation which seems to have since lost some of its original momentum. Naturally, such an acute and massive depletion of the

Faculty could not but have a tremendously depressing influence upon the immediate fortunes of your Alma Mater; the sudden withdrawal of so many eminent and able teachers was bound indeed to prove a frightful shock. For a moment the situation tottered visibly, but happily after a few oscillations it regained a firm footing and then all hands joined in a mighty and supreme effort to instil a new and vigorous life into the future of the college. The members of the teaching staff redoubled their zeal and devotion, and by dint of tireless labor and renewed sacrifice they have continued the noble work of this institution. To the pupils entrusted to their care they have given a conscientious, thorough and scientific instruction. In some respects perhaps the teaching may have been less brilliant and masterly than in the past, but in point of fundamental value and practical efficiency it has fully retained its former strength.

The Faculty has been admirably rewarded for its loyalty and devotion. After a period of quiescence extending over many long years during which it has been the silent and tepid witness of our efforts, our sacrifices and our hardships, the Board of Trustees of the Albany Medical College has suddenly jumped into a frenzied activity and decided to take matters into its own hands. It has reached the conclusion that an immediate and complete reorganization of the college was imperative and it has generously guaranteed the sum of thirty-five thousand dollars yearly for a period of five years in order to successfully initiate this splendid movement, but, side by side with this magnanimous and laudable outburst of enthusiasm, came the remarkable and amazing decree that in this great plan of reorganization the present Faculty would have no voice. Thus, without producing any evidence of incompetency, without even the shadow of a criticism to offer as an excuse for its act, the Board of Trustees has disqualified and unceremoniously deposed your honored and esteemed teachers, some of them venerable men, men who have grown old in the service of this school. How deeply chagrined and humiliated you must feel when you realize how simple it would have been a year ago to close our doors and allow this grand and glorious old institution to die a peaceful and honorable death. Such a course however would have been cowardly and unprincipled and the Faculty of the college, strongly imbued with a true sense of its duties and obligations to the community, soon found the necessary strength to transcend the appalling difficulties of the moment and to continue the life and mission of your Alma Mater. That such courage, loyalty and uprightness should have been repaid in equal terms of discourtesy and ingratitude shall always remain in my memory as a painful and confusing emotion. That the Board of Trustees is actuated by the loftiest of motives and that it is financing an educational experiment of the very highest order, I do not question, but why such a magnificent and vital enterprise should have necessitated a display of flagrant injustice, I cannot conceive. As was previously stated, it is readily conceded that there is ample room for improvement, it is frankly admitted that the college stands sadly in need of more trained teachers in some of its departments and that a more scientific curriculum has become indispensable, but all these deficiencies, great as they are, could in my opinion have been remedied without wantonly violating the traditions of this reputable old institution and without brutally compromising the name, prestige and professional standing of those who have bled themselves in order that it might live.

As most of you probably know, the project of reorganization has been confided to an administrator of mature experience and recognized ability, Dr. Thomas Ordway of the Harvard Medical School, who is to become Dean, the new executive Faculty is to consist mainly of the heads of the major departments together with the Dean and in the constitution of this Faculty the alumni of the Albany Medical College shall have but a minor share. The question which naturally arises for all of us is whether we still possess that unlimited spirit of self-sacrifice and disinterestedness which will enable us to ignore ourselves entirely and to lend our best efforts to the success of the new Albany Medical College, whether we should not act as citizens rather than as alumni, and, totally oblivious of our personal wrongs, continue to obey the nobler dictates of conscience and to serve the best interests of our community.

On behalf of the Faculty, I again extend to each and all of you a most cordial welcome, and I further beg to recommend for membership in your distinguished association the members of the graduating class whom I consider to be fully deserving of this honor and privilege.

On motion of Dr. B. K. DeVoe the thanks of the Association were tendered Professor Archambault for his address, and a copy was requested for publication in the ALBANY MEDICAL ANNALS and the daily papers.

Dr. Willis G. Tucker then moved that the President appoint a committee of five to nominate officers for the ensuing year. Carried. The President appointed as such committee: Drs. Willis G. Tucker ('70), Daniel C. Case ('70), Leo H. Neuman ('92), John H. Cotter ('78), and E. H. Ormsby ('13).

The Recording Secretary presented the

REPORT OF THE EXECUTIVE COMMITTEE AND RECORDING SECRETARY.

One meeting of the Executive Committee was held during the year, on February 9, 1915, with President Chase in the Chair. Dr. Babcock presented a report of the treasury, showing a balance on hand of $11.20.

On motion of Dr. J. L. Bendell, which was carried, the banquet committee of last year was continued, as follows: Drs. J. N. Vander Veer, W. G. Lewi and B. V. DeVoe.

Respectfully submitted, **J. M. MOSHER,**
Recording Secretary.

On motion of Dr. Eddy Haswell, the report of the Executive Committee was accepted and ordered entered upon the minutes.

The Treasurer, Dr. Robert Babcock, presented his report for the year, as follows:

TREASURER'S REPORT.

CR.	
Balance on hand May 1, 1914	$36 25
Dues received during year 1914	129 00
Check from banquet committee	28 05
Total	$193 30
DR.	
Various bills paid for which vouchers are presented	$182 10
Balance on hand May 1, 1915	$11 20
College Building Fund	$122 28

[Signed] ROBERT BABCOCK,
Treasurer.

On motion of Dr. Bransen K. DeVoe, the Treasurer's report was referred to an auditing committee, consisting of Drs. Bransen K. DeVoe ('04), Earl William Fuller ('08), and Henry E. Mereness ('02), who subsequently reported it correct. The report of the Auditing Committee was received and the committee discharged and the report of the Treasurer was accepted and ordered placed on file.

Ex-President Albert Vander Veer was then called to the chair, and President Chase delivered the following address:

PRESIDENT CHASE'S ADDRESS.

Gentlemen of the Graduating Class: In accordance with a time honored custom and by virtue of my office I am here to-day to address you. It gives me great pleasure to look into your youthful faces for it brings to mind events of forty years ago and provides at the same time the opportunity, so much prized by men of my age, of giving advice to younger men of the profession. Advice is easy to give, hard to take and as a rule accomplishes little. Before I begin however, we the alumni of the Albany Medical College wish to congratulate you upon the completion of your course and beg you to believe that we are much interested in you and hope that you are equally interested in yourself. This brings me at once to my subject, "Yourself."

Altruism has the opposite meaning of Egoism but in one sense they are not so different. Each of you has worked hard for many years to improve your mind and equip yourself to help others. To do this great work you must be great and to be great is to think well of yourself as of others.

> "To thine own self be true,
> And it follows as the night the day;
> Thou canst not then be false to any man."

You are about to enter the great market place: the professional and business world. In this market place you will find on sale everything you can possibly need; health, long life, success, happiness. You cannot get something for nothing. All these things are purchaseable and the price is reasonable; but remember, the difficulty comes, not so much in buying but in choosing. You are created in the image of God, a free moral agent and as a rule each is the arbiter of his own fate.

You are scientific men and you would like to feel sure whether or not these things be true. Here is an old law from an old scientific book, "Whatsoever a man soweth, that shall he also reap." If we could but learn this from others early! If we wait to learn the law by experience it is too late, for nature's laws are pitiless. The poet says,
"There's a divinity that shapes our ends, rough hew them how we may." This smacks of fatalism. Do not trust too much to a divinity. In the last analysis everything depends on yourself. Therefore the first need in this struggle for existence is health.

Health is not altogether an absence of disease but an abounding sense of well being. That is, the joy of living. Much is being done at this time to improve the "Public Health" but it seems to me that we are doing very little as individuals to improve our own health. Health is unquestionably a matter of choice and the only way to get the best results is to begin with ourselves. You are familiar with the fact that while we are saving the babies the death-rate from degenerative diseases, between forty-five and sixty years of age is on the increase. This is a sad commentary upon this boasted civilization of our time. We know the laws that govern health, but we know them not to do them. The Nazarites of the old Jewish times, three thousand years ago, were wiser than are we for "They drank no wine and ate no unclean thing." In a physical sense it is that which goeth into the mouth of man that defileth. Mr. Thomas A. Edison says that to drink alcohol is like putting dirt into the bearings of a fine engine. It means, very soon, the scrap heap.

What I have so far said applies to the period of preparation; for instance the first twenty-five years of life. "The body is the temple of the holy spirit." Take good care of it! The word is "Temperance" which means "Total abstinence" from all those things that are harmful in themselves and temperate in the use of all that is good.

While health and strength are so necessary for the enjoyment of life, so much to be desired, we know by experience that "The race is not always to the swift or the battle to the strong" but to the man who is able to keep going. The majority of the strong men of my acquaintance of forty years ago are gone.

The personal equation in this sense means the constitution and this means the amount of resistance to disease or strain a man is capable of. This is a sure indication of whether he has been temperate or otherwise in the past. The preachers will call you materialists perhaps. Accept the title. While they emphasize reformation, the "Medical Profession" ought to insist that formation or education is equally important at least. The Doctor is coming to his own. All these world movements for the betterment of the human race, such as improvement of the public health and the welfare of those yet unborn, is due to him. This may seem elementary to you but I am convinced that in an understanding and application of the simple laws that govern and conserve the health of the individual, lie the foundations of a useful and happy life.

The second active period in the life of a Physician should be forty to fifty years. Say from the age of twenty-five to seventy-five. If your life has been well ordered up to this time, success will be easier than failure. Success may seem doubtful to you but really you will be following the line of the least resistance. Again as in the first period success is a matter of choice and comes by process of law. Probably you have been told that hard work is the keynote to success and the man who keeps everlastingly at it is the only one who wins. Do not believe it. Work is quite essential to success and at the same time a blessing to humanity, but the reward that comes from hard work alone is not worth having. There seems to be a great difference of opinion as to what work really means, for what seems drudgery to one man is another's delight. It is a fortunate thing if you love your work so much that it is a pleasure, but it is a far greater thing to do useful and necessary work whether you like it or not. You may not like medicine at first but you will in time, for you will come to know that there is nothing in this world that will grip and hold you as this work will.

Well, the word, work, is not a good word, for while it doesn't mean much it is apt to bring unpleasant thoughts to young and old. To some of us older ones it brings memories of bitter fights against odds in the beginning and to you it will perhaps bring thoughts of the many things you will have to give up when you get into the harness.

It seems to me that the word that spells success in this period of life is co-operation. The word means faith in God and faith in man. It means the Fatherhood of God and the Brotherhod of man. It means the law of Love.

"God rules the world with truth and grace,
And makes the nation prove
The glories of his righteousness,
And wonders of his love."

Few of us will deny that we believe in a supreme being and few of us are willing to affirm it. Men act as if it were bad form to mention the name of their creator in a reverent spirit and as actions speak louder than words it is to all intents and purposes a denial.

God rules the world but not mankind. Nothing is impossible with God but to be inconsistent and to create man a free moral agent and then take that right or privilege away from him would be impossible because unjust and inconsistent. A man stripped of the divine right of free choice would not be a man.

God endeavors to teach us by a system of rewards and punishments that appeal to the honest man as being just and reasonable. This explains to us why "The fear of the Lord is the beginning of wisdom." The fear of suffering that is sure to come from the transgression of God's laws should indeed make us wise. God delegates his work of regenerating the world to human agents. He will not make us do it, but he can reward us for doing it, or punish us for not doing it.

I believe the practical work done by the Doctor one of the most potent influences for the uplift of society and brings a sure reward but the fullness of the reward depends upon the motive with which we do the work. This is well illustrated by James Russell Lowell in his poem "The Vision of Sir Launfal." You remember how the young knight in golden armor, well equipped in every way, rides through the castle gate into the world to find the Holy Grail. At the gate he sees the leper who asks for alms. In loathing and contempt the knight flings him a golden coin. After years of unsatisfied wandering he returns, ragged, worn and unhappy. It is night and the castle gate is shut so he suffers the bitter cold outside with the old leper but now the knight has pity for the leper and shares with him his last crust and brings him water from the brook. Afterward the knight sees in a vision the form of his master and hears his voice saying:

> "He who ministers to another's needs in love feeds three;
> Himself, his hungry neighbor and me."

You may gain fame and fortune but without love for mankind you will be starved and poor indeed.

This talk may seem out of place to men like yourselves but it is my firm conviction that faith in God and humanity is most essential to that fullness of life which we crave so much for you. No one more than the Doctor dislikes to hear a man or woman prattle of their religion or tell how they feel. A manly acknowledgment of a belief in God and a reason for the faith that is within you will help you greatly and advance the cause of righteousness in the world. The Christians of the olden time had a simple creed called the creed of nine words. "I believe in God and Jesus Christ his son." Our conception of the character of God is reflected in our own life or the civilization of a nation.

Faith makes you willing to co-operate with God and man and co-operation proves that you have faith, and faith is the law of progress.

Co-operation is based on the well known principle that in union there is strength. This means a willingness to work with others for the same object whether we agree on method or not. Method is the rock on which many worthy enterprises are wrecked. You have known of cases of this kind.

A worthy object; a multiplicity of plans; all good; any one of which would work out perfectly if accepted. All that is needed is co-operation and initiative. You will find co-operation necessary in your work as in all the other walks of life. Co-operate with your family, with your patients, with the church, with your friends and if possible with your enemies. Get the other fellow's point of view and if you can't, concede all you can to him. You will find occasionally an obstinate man whose pride of opinion will prevent you from working with him. If you cannot convince him that pure obstinacy is weakness rather than strength, you will have to let him go his own way.

The only way to get the confidence and co-operation of your patient is to be honest with him and if you do, it means success.

If there is anything in this law of God it means that you cannot injure another in any way without serious injury to yourself, or help another without benefit to yourself.

I believe this wholesale murder that is going on in Europe comes from wilful disregard or ignorance of this law. It seems probable though that when the autopsy is held it will be found that every warring nation is more or less to blame.

There is an old Greek statue of an archer, with his bow and arrow shooting at a mark and underneath it is this inscription, "Forgive us our misses." This is meant to illustrate that part of the Lord's prayer which says, "Forgive us our debts or trespasses, as we forgive our debtors or those who trespass against us." Your lives will be full of misses. You cannot always hit the bullseye. But failure rarely comes to the man, who with right motives keeps on trying. Our trespasses will be forgiven just in proportion as we forgive those who trespass against us.

From the cradle to the grave we are builders. I am persuaded that real success comes not altogether from great ability, from hard work or from what is understood as good luck, but if you desire to know and do the right, all the benign influences of earth and heaven will conspire to aid you.

When old age comes, what then? If you depend on work you will be disappointed for the night cometh when no man can work. Then comes rest and retrospection. When the mind's eye is turned inward and backward and you come face to face with yourself. The ability to face old age and yourself with serene faith and contentment, comes as a result of a lifetime of right living. Do not depend too much on the poet who says:

"There is a tide in the affairs of man which taken at its flood leads on to fortune." Failure does not come from one mistake, from one bad choice, by the turn of one tide for as long as one has a desire to do better there is a chance for him to come back.

I fear I have harped too long on one string so will close with these familiar lines:

> So live, that when thy summons comes to join
> The innumerable caravan, which moves
> To that mysterious realm, where each shall take
> His chamber in the silent halls of death,
> Thou go not, like the quarry-slave at night,
> Scourged to his dungeon, but, sustained and soothed
> By an unfaltering trust, approach thy grave,
> Like one who wraps the drapery of his couch
> About him, and lies down to pleasant dreams.

As President Chase concluded, Dr. Elwyn Hannock moved the thanks of the Association to him for his beautiful and appropriate address, incorporating in his motion a request for the manuscript, that it might be published in the ALBANY MEDICAL ANNALS as part of the transactions of the Association. Ex-President Vander Veer put the motion, which was unanimously adopted, and President Chase resumed the chair.

The report of the Historian of the Association, Dr. Bedell, was then presented and ordered entered on the minutes.

REPORT OF THE HISTORIAN, ARTHUR J. BEDELL, M. D.

Mr. President and Members of the Alumni Association: Last year your historian spoke of the changes made in the teaching force of the school. To-day, you have heard of the more recent alterations so that nothing remains for me to tell you.

Forty-seven join our ranks to-day. Again we look to these graduates as we have in former years to others for we expect these men of 1915 to prove an honor to themselves and thereby show how they were trained to start the study of medicine. We urge them to keep in touch with college affairs. We are glad to welcome these members and sincerely hope they will be worthy of the many trusts to be imposed upon them.

NECROLOGY.

During the past year thirty-nine of our Alumni have died:

Dr. JOHN O. NILES ('50), Brooklyn, N. Y., April 18, 1915, aged 88.

Dr. HERCULE DANSEREAU ('53), Thibodeaux, La., January 2, 1915, aged 82.

Dr. JOHN A. MACPHERSON SMITH ('53), Albany, N. Y., January 25, 1915, aged 82.

Dr. Nathanial B. Rice ('54), Chicago, Ill., June 10, 1914, aged 84.

Dr. Charles H. Smith ('54), Albany, N. Y., September 27, 1914.

Dr. Matthew R. Carson ('57), Canandaigua, N. Y., October 6, 1914, aged 78.

Dr. John W. Cobb ('58), Binghamton, N. Y., January 14, 1915, aged 76.

Dr. Abram DeGraff ('58), Guilderland, N. Y., January 1, 1915, aged 79.

Dr. Daniel V. O'Leary, Sr. ('60), Albany, N. Y., August 5, 1914, aged 70.

Dr. John L. Perry ('62), Baltimore, Md., April 13, 1915, aged 75.

Dr. Charles J. Bacon ('65), Syracuse, N. Y., September 3, 1914, aged 70.

Dr. Albert S. Newcomb ('66), Schenectady, N. Y., March 1, 1915, aged 73.

Dr. Horatio Gilbert ('67), Soldiers' Home Hospital, Bath, N. Y., April 25, 1915, aged 75.

Dr. Charles J. Simons ('67), Chicago, Ill., June 18, 1914, aged 56

Dr. John V. E. Winnie ('67), Sidney, N. Y., April 26, 1915, aged 71.

Dr. Edwin Crocker ('68), Narrowsburg, N. Y., March 26, 1915, aged 75.

Dr. Orris E. Herrick ('71), Grand Rapids, Mich., March 5, 1915, aged 66.

Dr. Charles T. Montgomery ('74), Saugerties, N. Y., January 15, 1915.

Dr. James T. Hard ('77), Sunbury, Pa., January 12, 1915.

Dr. Alexander J. Peet ('77), Miami, Fla.

Dr. Horatio Craig ('78), Ballston Spa, N. Y., July 13, 1914, aged 60

Dr. George W. Gregory ('79), Elmira, N. Y., February 26, 1915.

Dr. Robert W. Warner ('80), Ilion, N. Y., April 18, 1915, aged 56.

Dr. John W. Morris ('81), Troy, N. Y., October 5, 1914.

Dr. William J. Murphy ('81), San Bernardino, Cal.

Dr. Horace R. Powell ('82), Poughkeepsie, N. Y., December 30, 1914, aged 54.

Dr. Charles S. Barney ('83), Milford, N. Y., May 26, 1914, aged 55.

Dr. John V. Hennessy ('84), Albany, N. Y., July 13, 1914, aged 50.

Dr. Elmer E. Finch ('86), Schodack Center, N. Y., July 12, 1914.

Dr. George G. Lempe ('88), Albany, N. Y., May 17, 1915.

Dr. Edward F. Sheehan ('88), Ossining, N. Y., April 26, 1915, aged 59.

Dr. Alfred R. Brundage ('90), Chicago, Ill., July 20, 1914, aged 54.

Dr. Milan T. Ward ('94), Toulan, Ill., July 1, 1914, aged 55.

Dr. James H. Reilly ('96), Memphis, Tenn., June 17, 1914, aged 53.

Dr. William J. Sheehan ('97), New York City, January 14, 1915.

Dr. John M. Adey ('99), Cohoes, N. Y., December 26, 1914.

Dr. Thomas Carney ('02), Schenectady, N. Y., at Baltimore, Md., February 6, 1915.

Dr. John R. Devine ('10), Utica, N. Y., March 4, 1914.

Dr. Frank A. Searle ('14), Albany, N. Y., January 20, 1915.

CLASS OF 1845.

The class that graduated seventy years ago consisted of twenty-three men and as far as we are able to tell all have died.

The members of the Class of 1845 were:

Almon N. Allen, died February 6, 1884.
William Bassett.
Abraham C. Burke.
John Calhoun, Delhi, N. Y., died April 21, 1893, aged 73.
Augustus Campbell, East Dubuque, Ill., 1893.
Denman Clark.
Luther Cochrane.
Albert H. Corliss.
Edward Diefendorf.
Jacob A. Dockstader, Sharon Springs, N. Y.
Lyman C. Felch.
William H. Gedney, died 1887.
F. M. Hammond, died 1873.
Joseph W. Harmon, Chicago, Ill., died.
Hiram Hubbs.
Abram H. McKown.
William H. Miller, died May 23, 1873.
Solomon W. Moyer.
James A. Russell.
Thomas Smith.
Harlow A. Van Deusen, died.
Alfred Wands.
Henry R. White.

CLASS OF 1854.

Dr. Bedell presented the following letter:

Fairport, N. Y., *May 21*, 1915.

To the Association of the Alumni of the Albany Medical College: I salute you and extend the hearty greetings of a patriarch, with a few words that may be of slight interest especially to the newly fledged. It is with much satisfaction that I review my professional career of fifty years as a general practitioner in all branches, in two beautiful cities—Aurora, Ill., and Minneapolis, Minn.,—where duty led me from the palace of the millionaire to the home of the widow and fatherless, to the house of poverty and to the den of the outcast, doing what I could in each case to relieve suffering and cheer the sorrowing. I have a record of over thirty-one hundred cases of personal attendance of obstetrics, I think a mark in that line of the profession that few reach.

As I am not to sit at your banquet table, I will drink from a flowing bowl of crystal water to the health and happiness of you all. Fraternally,

S. F. Hance, Class '54, aged 90 years.

CLASS OF 1855.

The Class of 1855 had sixty-three members.
JOHN S. ADAMS, Oakland, Cal., died July 29, 1899, aged 70.
DAVID F. ALSDORF, Guthrie, Oklahoma, retired.
HENRY E. BABCOCK, New London, N. Y., died August 18, 1906.
THOMAS J. BARTON, Madalin, N. Y., died September 10, 1903.
HARMAN A. BUCK, Burlington, Vt.
REUBEN B. BURTON, New York City, died April 22, 1907.
ELIAB W. CAPRON, not located 1915.
ROBERT F. CARR, Macon, Ill., died March 13, 1893.
THOMAS H. CHAMBERS, Georgiana, Fla.
ROBERT O. CRAIG, Janesville, Minn., died July 13, 1907.
HIRAM C. CUTLER, died.
HAMILTON DEGRAW, died February 1, 1912.
DANIEL F. DREW, Lynn, Mass., died 1886.
WILLIAM H. DUTTON.
ALEXANDER ENNIS, Pattersonville, N. Y., not located in 1915.
SOLOMON S. FORKS, Milton, Fla., died.
DANIEL GILLIS.
JOSEPH C. GREENE, Buffalo, N. Y., died Jan. 3, 1899.
S. HENRY HARRINGTON, Chenango Forks, N. Y., died.
JOSIAH HASBROUCK, Port Ewen, N. Y., died March 25, 1889, aged 59.
JEROME B. HOLCOMB, Newport, N. Y., died January, 1903.
DANIEL J. HOSTETLER, Decatur, Ill., died August 12, 1858.
JOHN W. HURST.
CHARLES K. IRWIN.
L. M. JOHNSON, Greene, N. Y., died.
HENRY B. JOHNSON, died.
JAMES E. JONES, Clayville, N. Y., died December 25, 1904, aged 73.
THOMAS J. KING, Machias, N. Y., died November 5, 1889, aged 64.
JOHN W. KNIGHT, Farmington, N. H., died October 26, 1904.
WILLIAM F. LAUDERDALE.
BENJAMIN LEMON, not located in 1915.
JOHN LOW, died.
HENRY D. MANN, died.
JOHN D. MCCONNELL.
LEROY MCLEAN, Troy, N. Y., died April 23, 1897, aged 66.
THOMAS L. MORGAN.
MARION NASH.
NELSON NEELEY.
GEORGE H. NEWCOMB, Albany, N. Y., died February 22, 1898.
JOHN L. NIHILL.
GILBERT E. PALEN, Philadelphia, Pa., died August 28, 1901.
WARREN W. PALMER, Erie, Pa., not located in 1915.
MOSES B. PARDEE, So. Norwalk, Conn., died November 9, 1892, aged 71.
DANIEL PARDEE, Fulton, N. Y., died August 25, 1891, aged 61.
CHARLES A. PETERS.

Charles Richards, died February 5, 1890.
William H. Rulison, died.
Edwin F. Silcox.
Julius A. Skillton.
John A. Smith.
Lewis W. Sutherland, Pittsburgh, Pa., died November 12, 1904.
Andrew Stafford, Preston, Md.
Charles Storck, Chicago, Ill.
Stephen B. Valentine.
Solomon Van Allen, Port Jervis, N. Y., died July 7, 1894, aged 65.
C. H. Vaughan.
Hamilton M. Weedon, Eufaula, Ala., died September 10, 1908.
Peter S. Weidman, Edwardsville, Ill.
Jared P. Wheeler, Brighton, N. Y., died February 27, 1901.
J. Ralsey White.
Stephen Wright.
Daniel S. Young, died February 20, 1902.
A. Judson Billings.
Jonathan Cass.
Louis C. Greene.

Dr. David F. Alsdorf, Guthrie, Oklahoma, writes as follows: "I would be pleased to meet with survivors of Class of '55 but am 82 years old and have not been able to travel for the last two years. Spring of '56 located in Corunna, Mich. Was in general practice there for twenty-five years and worked hard. Was examining surgeon in Provo. office during war, pension examiner twenty years, city clerk several years, city assessor several years and examiner for New York Life and several other companies. Went into the drug business in 1867, sold out in 1883, and practically gave up all business except for few old friends. Came here in 1892 and have done nothing since but loan a little money and exist on interest. I am pretty near alone in the world. .Have one son in business here, a bachelor of forty-eight. The government has paid me over eight thousand dollars for examinations and I have attended over twelve hundred obstetric cases."

Dr. Harmon A. Buck, Burlington, Vt., historian of the Class of 1855 writes: "After graduating from the Class of '55, I went to Marengo, Ill., and practiced there until the Civil War commenced and then I was commissioned first assistant surgeon of the 15th Illinois Infantry, the eighth regiment that was organized for the Civil War, numbering from the 7th. I was commissioned the 14th of May, 1861, by Governor Yates of Illinois. I served on Gen. U. S. Grant's staff as assistant medical director, at the first battle that he won at Ft. Donelson. I resigned on account of sickness of my brother, who was assistant surgeon and went home. I went to Washington, D. C., was examined for promotion, passed and was put in charge of a church hospital in July, 1862. I was appointed examining surgeon for pensions for Chicago, March, 1863.

I entered the 14th Regiment Illinois Infantry in 1864 as surgeon, served the full term and then entered the 150th Illinois Infantry as surgeon, served until January 16th, 1866, and was mustered out with three months' pay proper by being at the close of the war.

"I was on detached duty as brigade surgeon, division surgeon, surgeon-in-chief of Hospital for the District of Alatona Headquarters, Atlanta, Ga. Since returning to civil life, I have practiced in St. Louis, Mo., Peoria, Ill., New York, Brooklyn, Garden City and Hempstead, L. I. I was born in Buck Hollow, Fairfax, Franklin Co., Vt., the 27th of February, 1825, and to-day I have rounded out my ninetieth year, so help me God."

CLASS OF 1865.

The members of the Class of 1865 were:
Duncan S. Allen, Seneca, N. Y.
Douglas Ayres, Fort Plain, N. Y., died November 20, 1913.
Charles J. Bacon, Fulton, N. Y., died September 3, 1914.
James F. Barnard, died 1867.
Edwin Barnes, died January 22, 1904.
Reuben Barney, Chillicotke, Mo., died July 16, 1903.
D. Albert Barnum, Cassville, N. Y., died January 2, 1905, aged 60.
Benjamin F. Brown.
Ira D. Brown, Weedsport, N. Y., died June 23, 1899, aged 68.
John W. Cooper, Jones, Oklahoma.
Thomas D. Crothers, 142 Fairfield Ave., Hartford, Conn.
Cornelius J. Dumond, New York City, died January 25, 1905.
Emmett Flagler, Lansingburg, N. Y., not located in 1915.
Dwight Flower, Monticello, Wis., died March 15, 1908.
Robert M. Fuller, Schenectady, N. Y.
James S. Gillett.
Alexander C. Goff, Syracuse, N. Y., died 1887.
Thomas P. Graham, Pittsburgh, Pa., died April 4, 1901, aged 61.
Alexander Hamill, Baldwinsville, N. Y., not located in 1915.
William B. Hostetler, Decatur, Ill., died August 21, 1913.
Daniel B. Howard, Warrensburgh, N. Y., died September 21, 1903.
D. L. Humphrey.
W. L. Johnson, Fulton, N. Y., died June 26, 1910, aged 66.
Samuel M. Laird, Tipton, Cal., died May 5, 1907.
Orrel McFadden, Massena, N. Y., died December 29, 1910.
Friend J. Ott, died August 17, 1878.
Lewis Pendleton, Palm Beach, Fla., died January 13, 1898.
James A. Phillips, Morristown, N. Y.
William H. Robb, Amsterdam, N. Y., died January 12, 1898.
George Rowe, Gloversville, N. Y., died May 5, 1907.
Conant Sawyer, Auburn, N. Y., died February 20, 1898.
Hugh Sloan, Oneida, N. Y., died September 7, 1910, aged 66.
Alonzo R. Stephens, Herrickville, Pa., died February 10, 1910.

Gustavus Treskatis, New York City, October 15, 1893.
Jason B. Van Hoesen.
Henry C. Van Zandt, Schenectady, N. Y., died February, 1900.
W. J. Warren, died.
George G. Whittaker, Fulton, N. Y.
Edwin I. Wood, Stillwater, N. Y., died November 27, 1908.
Levi Wood, Ephratah, N. Y., died January, 1906.
William Zeh, died.

HISTORY OF THE CLASS OF 1865.

By T. D. Crothers, M. D., Hartford, Conn.

It is an unusual event for the survivors of any class to return to their Alma Mater fifty years after graduation, especially in medical colleges. The physician's life is so full of responsibilities and intense activity, that long before the half century comes around, he has passed away, or is interned in some harbor.

Occasionally some one man may appear at the Alumni meeting a half century after graduation, but he is practically the last leaf on the tree, quivering and shaking in the winds of the present.

In Shakespeare's Seven Ages, the last stage is called San's ears, San's eyes, and San's everything. This is not true in this age and country. One is astonished to find how much of literature, science and grand work for the world is done by men past three score years and ten.

A graduate of this college, still living, Dr. Thompson of New York has contributed some excellent works and is a good example of this. Of course when men reach the "sundown" region of life, there comes reflections and reminiscences and an effort is made to sum up the experiences of the past, and in some way forecast the history of the present. This often is the greatest monument to their memories, more enduring than granite or the eulogies of co-temporaries.

This is the occasion to make a contribution to the history of the Class of 1865, not that it was unusual or intellectually stronger than any other, but simply to make a record that may serve as a stimulus for other work in this direction.

December 24th, 1865 was a stormy night. The snow was falling thick and fast, when forty-two rather robust looking young men gathered in the Senate Chamber of the old Capitol to receive their diplomas. There was no music, no robed students or teachers, but simply a few cold, venerable looking men occupying the speakers' chairs and looking down gravely on the students and their friends banked up behind them. There were no formal speeches, but simply quiet, dignified remarks with simple ceremonies. The valedictorian of the class read a sensible but colorless address, and the essayist who was an erratic looking man, followed with a sensational paper describing the quack drugs used by the public, and stating in terms of weights and measures the quantities.

This was to illustrate the need of medical training of their patrons to avoid remedies of this class. The essayist was a reporter by profession and divided his time between editorial work and medicine. He died in middle life greatly respected.

There were the usual congratulations, greetings and good wishes and promises for the great future, and thus we sailed away from the Albany Medical College, a half century ago.

From 1861 to 1865 there was a peculiar psychological atmosphere, associated with medical studies in medical colleges. There was an expectation and earnestness and intense outlook for the future, which seemed to impress every student. In '63 and '64 the bulletin board of the old college was always covered with advertisements of vacancies for physicians. There was a feeling of unrest in the air, of doubt, suppressed excitement, intense sympathy with the great events on the battle line and the work in the hospitals, and a desire to be of some service, and to be fitted in some way to occupy these places when the call came.

The need of medical men both at the front and at home was evident, and the great disturbing influences coming from the war, opened fields for adjustment and opportunity for change that appealed to every one.

A medical education at that time, was capital to a larger extent than it ever had been before. It was capacity, efficiency to put to service at once that which would bring returns. Many of the students who received their diplomas had served in the army. Two of them were wounded. Others were very anxious to enter the service, and take part, as medical men, in the great events that were about to follow in the reconstruction period.

The war had ended, but the prospects of another war with Mexico were prominent.

Of the forty-two young men who graduated eight or more had received college educations. Fifteen or so of the remainder had prepared for college, but feeling the pressure of the times, took up medicine as the more practical measure. The remainder had common school educations supplemented with a few terms at the academic schools of that day, and over thirty had had some practical service in the offices of active physicians, assisting them in various ways.

The army experiences of others had given a certain independence and realistic consciousness of what medical training meant, and the value of the facts necessary for the service in the future. I think it may be said that the classes that graduated from Albany from '61 to '65 and probably a year or two later, were most eager and anxious to secure the culture and training in medicine because of the intense realism of the times.

Medicine seemed an open door to a new world that stood ready to welcome them, and while the acquisition of a diploma was important, there was a wide, wide, unknown future stretching out, full of possibilities.

At this point of view, a half a century after graduation, it is well to stop a moment and inquire whether the history of this class was along the same lines as that of other classes of medical students in the past.

Sir James Paget made an exhaustive study of the subsequent history of medical students who graduated from one of the great colleges of London, and his conclusion seemed to be confirmed by the history of other graduates both in this country and Europe. He found that less than fifty per cent, after twenty-five years had achieved any kind of success in the profession. Of this number about eight per cent were eminently successful in later life. Forty-two per cent attained only moderate or limited success. Some of them died early, others fell into grooves and struggled along to the end of life. Of the remaining fifty per cent fully one-third or more, found themselves unfitted and dropped out of the race. Twenty per cent abandoned the profession for some other work, and the remainder were failures in every particular. The prominent fact is, that one-third actually blundered in taking up medicine, and that over twenty-six per cent failed and disappeared, also that great success was limited to a very small number, and moderate success was possible to less than half of the graduates.

This may seem depressing, but somehow there is confirmation in many ways, even here in this country, with all the stir and dash and delirious attractions that open up to the young man. From these data, it is natural to inquire whether the history of the Class of 1865 followed these lines.

Fortunately, I have made many private notes and have had a very large acquaintance with the profession, which has enabled me to gather up a great many facts that would have been lost otherwise.

In 1875 ten years after graduation, about twenty-eight of the class of forty-two were hard at work, settled and apparently doing well. Nine were drifting. Two had died and three had dropped out of sight. In the second decade, in 1885 less than twenty-five were still in practice. A number had disappeared, and death had cut off many of them; in 1895, thirty years later, less than twenty were still in active practice. The rest had died or disappeared, in 1905 forty years after, about twelve were still at work, and now fifty years after, there are only five known to be living. There are definite records of the death of twenty-eight. The remainder have been lost track of and no records can be found of what became of them.

Evidently from this, fully half of the class became respectable and moderately successful physicians. Several of them became very prominent in their communities and left very pleasant memories among their co-temporaries. A more detailed study shows that after graduation four or so took post-graduate courses in different colleges; two went abroad "walking the hospitals" with satisfaction to themselves at least.

Of the seven literary college graduates, five were failures in medicine, or at least abandoned the profession. The other two were moderately successful. Four of the graduates became teachers in colleges. Several of them specialized as surgeons and obstetricians, but their success was limited to the towns and cities they lived in.

One fact will be interesting, that there was no waiting period for members of the classes of these days. They all began to practice, almost as soon as they left the college. Another fact worthy of note is that at least five or six of the class married into wealthy families, and became paralyzed so far as any future ambitions were concerned. At least eight or ten of the class became moderately wealthy as commercial physicians and speculators, evidently sinking the scientific spirit into the ambition to accumulate money. Several of them inherited some property, and this seemed to neutralize and destroy their love for science.

At least seven or eight went down in the malstrom of spirit and drug neuroses. Two poor fellows came under my care, far down in the terminal stages. As far as I am able to learn, the number of failures from spirits and drugs, was less in this class than in others. Of course unfortunate social relations contributed to the collapse of several. Two of the class became missionaries. One died in the foreign field, and the other returned thirty years later bringing with him three little motherless children, to be educated here, and to start life again.

Three or four of the class went into politics. Two reached the legislatures and left little or no record that could be referred to with pride. One of the graduates became an adventurer, and died on one of the northern explorations. Another spent his life as editor of the *Scientific American,* and did very excellent work, and was highly respected as a man and scientist.

Another graduate did very brilliant work in the field of photo-microscopy and literally outlined much of the work of the present, but failed to develop it, and hence lost the credit which he was entitled to. Another graduate married an authoress and gradually withdrew from medicine and showed intense satisfaction in contemplating the work of his wife.

Five of the class became medical tramps, in the better meaning of that word. They went from place to place, always looking for better fields of practice, but like the squatter settlers in a new country, they kept moving on. Four of the graduates died from accidents and others who disappeared, probably died the same way.

It is a pleasure to note that so far as I am able to ascertain, no one of that class ever degenerated into a quack or became a criminal with a court record. On the contrary, quite a large number affiliated with Masonic organizations and churches, and thus became representative men.

In all probability fully half of the class attained reasonable success, made a living, practiced their profession and were more or less respected in the community in which they lived.

The records of the deaths of the class confirm about the same statistics which have been noted of physicians in general. Of the twenty-eight deaths recorded, the oldest died at seventy-four, the youngest at twenty-six, and the average age of death was about sixty-two years. Of the five living the ages are probably beyond seventy. Those who are unacounted for, it is possible may have lived to good old ages in some other vocation.

A most interesting conclusion can be made to this sketch by noting some of the pronounced personal influences that no doubt made a strong impression on this class. I think we can all say that everyone's life is very largely shaped by early ideals and early impressions. Each professor and his subject, in the medical colleges as elsewhere, makes special appeals to students, and these appeals, contribute more or less largely to their future success. I often feel that many men teaching in colleges have a larger personal influence on the students than intellectual, and that their personality lives on, while their lectures and teachings may be forgotten.

In all probability, during these war days, and particularly during '63, '64 and '65, the personality of two men of the Faculty was far more influential and lasting on the future of the students, than others. Dr. March was one of these men. His manner was emphatic, positive and breezy, and yet so clear and kindly that it formed an ideal which was very impressive, and never forgotten. Curiously enough, the text-book, Druit's Surgery which he followed very closely in outlines and about which he wove a great mass of clinical and personal experiences and opinions, was adopted by nearly all the class as an authority. Years afterwards, I saw this book in the office of nearly every graduate of that time and it seemed to be associated with, and recognized as a part of the teachings which they received in that period, which lingered on through a life time.

When he had anything to say outside of the strictly scientific topics, it was so clear, authoritative and sensible, as to attract attention. One remark which he frequently injected was that a medical man should be a gentleman on all occasions, no matter what his other limitations were. He should rise above the common class and exemplify his training.

The next man whose personal influence was equally impressive was Howard Townsend, who was not only a good teacher of physiology, but he had an undefinable personality and idealism in all his ways, manners and dress, and even his voice, expressed a lofty courtesy that was quite in contrast with others. He was an ideal gentleman, and gave the impression of a student's eagerness to learn and to compare facts, and to acquire what seemed to be the most reliable and accurate of them all.

The other teachers, undoubtedly had distinct personal influences and manners in teaching, that created distinct impressions, and yet they were along the line of other men and other physicians, and not very distinct from them. No doubt each one left a more or less permanent impression on the students, especially those who were interested in his topic. Later in life these impressions appeared in various ways.

It was a well recognized fact that from the very beginning of the Albany Medical College, there were always several teachers of pronounced personalities and obviously different in many ways from the average physician seen outside, and that gave a certain power and attraction that has lasted down to the present. In all institutions there are always two or three men who are recognized by students as superior and as approximating the highest ideals of medical learning and skill. Often the influence of a single man, is traceable in a very marvelous degree in the generations of students that follow.

As a rule, students are very keen in their search for ideals, and in their observations as to what constitutes a successful physician and how to approximate and follow in his footsteps. There is a psychical atmosphere in every college which gives form and shape to its graduates, and we are beginning to realize how far these impressions are creative and controlling.

It will occur to some of the older ones, that not infrequently the egoism of the graduates of certain schools (who assume a superiority to all others) is an example. Evidently this is not based on the superior knowledge they received, but on the psychical influence of the teachers, who impressed the students that they were hearing the final words of science, which were not uttered at any other place.

Other illustrations will occur to us. One of them, I am tempted to refer to, because it represents another, and lower step in the scale. From one college the graduates seemed to idolize story telling, and continuous humor at the frailties of human nature, and an indefinable low level of looking at things, skepticism of the best things of life, and looking for intrigue and hypocrisy, and deception. Evidently this was the direct result of the psychical impressions made on the students by the teachings of the professors.

It is a source of great pleasure, which I think is shared by every graduate of this college, that the ideals have always been good and clear. They have been spirited and elevating. The teachers have represented to a large extent the better instincts of the profession, with decided intimations of the coming man and the coming profession.

I feel impelled as a sort of a conclusion to this sketch, to outline some of the facts which I know we all recognize, that are becoming more and more prominent on the horizon of the future.

The prevalent idea that preliminary training in literary colleges and elsewhere should precede the study of medicine, and that when the diploma is granted, hospital training, post-graduate courses here and there are the first essentials, and becoming more and more requisite to success in the profession, does not express only a small part of the work.

Medicine has reached a point of recognition and practical value to the individual and race, that calls for a higher type of exponents in all circles of life. This demand is more imperative than ever. First the physician who represents the great world of facts concerning life and living, must himself be the type of health and vigor. He must show that in his personal life and appearance he approximates all that is strong and vigorous, both mentally and physically. He must be a gentleman in the highest meaning of that word. He must be a scientist to know how to discover facts and to judge rightly of their meaning. He must have a voice, a manner and a certain external attractiveness that indicates his superior training and superior thinking. Signs of ill health, coarse manners and coarse habits, eccentricities are heavy handicaps to the successful physician to-day.

A half a century ago, these were not recognized and were not unfrequently attributed as evidences of superiority. To-day this has passed by. The physician who is a healthy, vigorous, well developed man, who in voice, conduct and manners, shows that he is a superior man to those in the community will have no waiting period for practice. No questions will be asked about where he graduated. The inquiry will be, how clearly he can recognize disease and conduct it to a favorable termination? What advice can he give in preventive medicine? What can he bring to the worn and tired men and women that will be new and helpful?

The world of psychology, meaning the study of the mind and its relation to every day life, has come into medicine, and the student who does not know of this new field of how to adapt himself to the surroundings, how to study men and women, mentally, as well as physically, will fail. The public want superior men as physicians, more so than ever, to-day, and the physician who shows neglect of his own personal life and care of himself will decline, in the estimation of the best people.

The graduates of to-day enter upon a new world, a very large part of which is to study their own strength and vigor and develop themselves personally, and in that way they will attract others and be called on for service. The young physician who starts on a level with drinking and smoking co-temporaries, among laymen, and who thinks he can command their respect by living and thinking as they do, is a failure.

These facts are more or less common place, but their meaning becomes more and more significant every year. In a word, the physician of to-day and to-morrow must be the best possible type of the race.

In this sketch, I must refer in a brief comment to these lone survivors of the Class of '65. Our work is practically over in some respects, but we can felicitate ourselves in having made the journey so far, doing the best we possibly could; with all the storms and trials that we have passed through there comes the satisfaction of having helped on in some way, perhaps unknown to ourselves, the great march of the race, from the lower to the higher.

We all started within a radius of two hundred or three hundred miles from the old college, and most of us have exemplified the highest type of medical work in the family and general physician. We have accepted the situations that came to us and treated them with the best judgment we possessed, and that is the satisfaction that brings peace of mind and contentment beyond any earthly possessions.

While we are in the "sundown" region, we look out upon the larger dawn of medicine and the tremendous revolutions that are before us and the demand for a higher type of men, a broader class of college teachers and more intense personal study of individual lives.

We extend to the college our warmest greetings and to the young men going out to-day, our highest hopes and we add to this a great basil fact, that your future is exactly what you make it, not surroundings or conditions. It is what you personally idealize and attempt to materialize.

The bell rings, and the curtain drops on the Class of 1865.

Tho' our hearts brook o'er the past,
  Our eyes with smiling futures glisten,
For lo! a new dawn bursts up the skies,
  And we lean out our souls and listen.

Tho' Age wearies by the way,
  And hearts break in the furrow,
We have sown the golden grain to-day,
  The Harvest comes to-morrow.

BRIEF SKETCHES OF THE SURVIVING MEMBERS OF THE CLASS OF 1865.

Who Celebrated the Fiftieth Anniversary of their Graduation at Albany, May 25th, 1915.

Dr. George W. Whitaker, was born in Fulton, N. Y., in 1842. He prepared for college at the Valley Seminary. Gave this up to study medicine with his brother-in-law Dr. Baker, of Fulton. In 1863, he took a course of lectures at Burlington, Vt., and in '65 graduated from the Albany Medical College. Began to practice in New Haven, Oswego County, N. Y. In 1867 married Miss Ella M. Baker who graduated from the Woman's Medical College in 1877.

They both practiced medicine until 1880, when his wife died, and he moved to Fulton, N. Y. Later he was married to Miss Louisa A. Dean and he has two children by this marriage.

The doctor has been prominent for his large experience in confinement cases, also as a health officer in his town and identified with the Methodist church and all humanitarian works.

Dr. Duncan S. Allen, of Seneca, N. Y., was born in that place, and educated there. After graduating from the Albany Medical College in 1865, he opened an office in a frontier town in Michigan. Two years later he returned to Seneca, where he has continued in active practice up to the present. In 1870 he married. His wife died a few years later, leaving one child which is still living. In 1877 he was appointed health officer and in 1890 president of the board of pension examiners, and has been the leading physician in this section for over forty years, doing general practice and taking a very active part in all the duties and obligations of the community. He represents the best class of general practitioners whose work has been done with consistent energy and great satisfaction to himself and friends.

Dr. Robert S. Fuller, born at Schenectady, N. Y., graduated from Union College in 1863 and specialized in chemistry and toxicology. After his graduation from Albany in 1865, he made some remarkable discoveries in microscopic-photography, also of chemical re-agents and triturates. In 1866 he settled in New York and combined with the general practice, scientific studies of drugs and methods of preparing them.

Many of these researches were epoch making and were the foundation of a great deal of the present literature. In 1900 Dr. Fuller returned to Schenectady, his native place, where he is living at present, and is actively engaged in researches which have been recognized by the government and by large manufacturing concerns. He has been president of the Chemical Society of Union College. The doctor is unmarried. He has received many honors, both at home and abroad.

Dr. Thomas D. Crothers, was born in Charlton, N. Y. Prepared for college at Fort Edward Institute, gave up a collegiate education and entered into medicine. After graduating in 1865, he began the practice of medicine at West Galway, N. Y. In 1870 he moved to Albany. In 1873 he married Mrs. Sarah L. Risedorf. In 1875 he was appointed assistant physician at the New York State Inebriate Asylum at Binghamton, N. Y. In 1878 he was appointed superintendent of Walnut Lodge Hospital, Hartford, Conn., at which place he is at present. He has no family. He has become an expert in the treatment of spirit and drug neuroses; is the author of three text-books on these subjects, and editor of a journal devoted to this specialty. Dr. Crothers is probably the most widely known physician in the country, through his writings and pioneer work.

CLASS OF 1875.

The members of the Class of 1875 were:

Franklin P. Beard, Cobleskill, N. Y.
John N. Bradley, Berne, N. Y.
Warren M. Brand, died a few years after graduation.
Herman Chase, Palmyra, N. Y.
Berthold M. J. Conlin, Owatonna, Minn.
George F. Cox, Stillwater, N. Y., died September 21, 1876.
James O. Davis, Gilbertsville, N. Y.
John D. Day, Carbondale, Pa.
George E. Elmendorf, Coeymans Hollow, N. Y., died June 16, 1894.
Benjamin F. Evans, Clark's Green, Pa.
Lewis Fernalld, Maynard, Minn.
Robert Fuller, Schenectady, N. Y., died May 9, 1894.
Francis E. Hale, Providence, R. I., died May 21, 1903.
William A. Hall, 1777 Colfox Ave., Minneapolis, Minn.

William N. Hays, Albany, N. Y., died July 29, 1895.
Henry P. Holmes, 512 Second Ave., Troy, N. Y.
John W. Houser, Taylor, Pa.
James B. Kershaw, died.
Joseph McC. Lansing, died.
David S. Neer, Beaucoup, Ill.
Nathaniel E. Paine, West Newton, Mass.
William F. Patterson, Chapel Hill, N. J.
Henry C. Peck, Port Dickinson, N. Y., died May 11, 1908.
T. Kirkland Perry, 174 Second St., Albany, N. Y.
Milford L. Pine, Fabius, N. Y., died about 1895.
William L. Purple, Albany, N. Y., died May 25, 1904.
Elbert T. Rulison, 1329 Eighth St., Sacramento, Cal.
Julius R. Schmidt, died 1877.
Clarkson C. Schuyler, Plattsburgh, N. Y., died August 15, 1905.
Seth G. Shanks, Albany, N. Y., died November 5, 1910.
Arthur V. Smyth, Amsterdam, N. Y.
Peter Snyder, Rensselaerville, N. Y., died 1898.
William Stevens, 381 Central Park West, New York City.
John W. Sterricker, Roseboom, N. Y.
Daniel P. Van Court, Mohawk, N. Y., died June 1907.
William H. Vanderzee, Albany, N. Y., died August 29, 1893.
George M. Viall, East Dorset, Vt., died in 1912.
George W. Wentworth, died.
Eber A. Wood, Syracuse, N. Y., died August 12, 1907.

Dr. Franklin P. Beard after graduation located at Summit, N. Y., staying there until 1886, when he removed to Cobleskill, N. Y., where he is now located.

Dr. John N. Bradley is engaged in practice at Berne, N. Y.

Dr. H. L. Chase, of Palmyra, N. Y., writes: "My life has been so uneventful that it does not seem worth while to chronicle it. On second thought however, its very uneventfulness might interest some of my classmates. After my graduation in eighteen seventy-five I started in practice at Macedon, four miles from my present home and only a few miles from the farm where I was born. In less than six months from the time the shingle was hung up I was married and doing a good business. Mine has been a general family practice which I prefer to any other. I lived in Macedon for fifteen years, then moved to my present home in Palmyra where I have been for nearly twenty-five years. I was coroner twelve years which gave me an extensive acquaintance throughout the country. I have had a good practice from the beginning; saved a little money each year; have traveled quite extensively in my own country and have had a good time. It is my desire to stay in the game as long as possible. I have two children and four grandchildren in whom I am much interested. I never gained or lost a dollar in speculation and in consequence have no cause to worry."

Dr. B. M. J. Conlin, of Long Beach, Cal., writes: "Your letter of recent date asking me to be present at the reunion of my class of forty years ago; and I should have written you ere this but expected to be able to be present and to-day I find I cannot attend. I am real sorry I cannot be there for am afraid I shall not attend the next one, and should I go to the next reunion the other classmates who would be there would be so deaf that there would be no pleasure in talking to them. My life since leaving has run along very quietly, nothing much to mar its serenity; no squalls, no storms and now that I am nearing shore strong vigorous and healthy I am content. First went to Binghamton one year, then abroad two years, traveled around one year, located in Alexander, So. Dakota, then a wild frontier town, stayed there until 1895 when I moved to Owatonna, Minn., where I practiced until 1913, sold out there and after traveling around awhile located here in Long Beach where I am again having a good practice. Have two sons and one daughter all married and doing well. Have made it a practice every third year to go away for three months and attend a post-graduate course and for the last twenty prior to coming to California I had the great advantage of attending the Mayo clinic at least once a week."

Dr. J. O. Davis, of Gilbertsville, N. Y., writes: "Forty years ago there graduated from the Albany Medical College 'the most brilliant class' of our Alma Mater's ever brilliant career. A faded and time-worn copy of the 'order of exercises' lies before me, and the names thereon, what visions they bring up—Beard, Bradley, Brand and others —Day, the elongated Yankee from the Granite State, Elmendorf, the quiet but studious German, House, the abbreviated Pennsylvanian, 'Similibus' Paine, Perry and Purple, the Albany dudes, but all fine boys, Schuyler, the brilliant and lamented who was to fill an early grave, stricken by his hereditary foe, tuberculosis. So the names on the old program stand forth and one wonders how many after forty years of strife and struggle, have realized the visions that ambitions entertained. as one by one they received their sheepskin on the stage of old Tweddle Hall.

"As one of the Class of '75 I have no notable achievements to record. I have tried to do my chosen life's work to the best of my ability and if being free from the thrall of filthy lucre is any proof of the attainment of the object aimed at then I have succeeded most admirably. God bless you all."

Dr. John D. Day is still practising at Carbondale, Pa.

Dr. Benjamin F. Evans is practising at Clarks Green, Pa.

Dr. Henry P. Holmes is in practice in Troy.

Dr. William A. Hall, of Minneapolis, Minn., writes: "I shall try to be present at my fortieth reunion on May 25th next but cannot say positively yet. I have been ill since May, 1914, but am getting better now, but have not been able to work any until the last month. Remember me kindly to Dr. Vander Veer when you see him. I trust all will go well and that I will see you all on May 25th."

Dr. J. W. Houser, Taylor, Pa., writes: "In reply to yours of March 25th, I wish to say that I will make an earnest effort to be present at our fortieth reunion May 25th. In regard to my history and of the boys of '75 will remember that I made history very fast while at A. M. C. Since graduation it can be summed up in a few words. Forty years of the most arduous and exacting work ever imposed upon any man. I have not even been sick enough to earn a decent rest. I married in 1878 and with the assistance of a good wife have raised a family of five daughters to womanhod, the fourth of whom will graduate at the Woman's Medical College, Philadelphia, June 2 of this year and the fifth at the State Normal School about two weeks later. I located in Taylor, a suburb of Scranton, Pa., soon after leaving Albany and I am here yet although owing to my extensive practice there are few other people here who were here when I first hung up my shingle. I am a member of our County and State Medical Societies. I have tried to keep pace with the profession and with that end in view have spent considerable time at the surgical clinics of Drs. John B. Deaver and the late Joseph Price, of Philadelphia. I was on the surgical staff of West Side Hospital, Scranton, nine years, for several years connected with the State Department of Health in the suppression of epidemics of communicable or preventable diseases and have been health officer of our town seven years. Within the past year have become a member of the Presbyterian church. These few minor matters with the care of a large practice and the supervision of the education of five daughters, I consider a man's size job and if I live to complete it (next month) I'll take a day off and go fishing."

Nathaniel Emmons Paine was born at New Hartford, Oneida Co., N. Y., July 14, 1853, the eldest son of Dr. Horace Marshfield and Charlotte (Mann) Paine. He lived in Clinton and attended schools there until nearly twelve years of age, and then moved to Albany, where he became a student in the Albany Academy, and prepared for college in the private school of Professor Lewis Collins. He entered Hamilton College in September, 1870, and was graduated in the class of 1874. In September, he began the study of medicine in the Albany Medical College, and was given the medical degree in December, 1875. Wishing to add to his clinical experience, he went to Vienna and remained there from June, 1876, until April, 1877, gaining practical acquaintance with several medical specialties. Upon returning, he was appointed assistant physician in the Middletown State Hospital, New York, and continued there for about three and a half years. In May, 1885, he became superintendent of the Westborough State Hospital, Massachusetts. After building this hospital and furnishing and organizing its forces and work, he remained in charge until the first of February, 1892, when he opened a private hospital for nervous and mental invalids, at West Newton, Mass. One department was known as the Newton Nervine and the other as the Newton Sanatorium. After eighteen years, he retired from active private hospital work, and now limits himself mostly to consultation practice and other personal interests.

He has been professor of psychiatry in Boston University School of Medicine for twenty-eight years. He has been a State trustee of the Massachusetts Homeopathic Hospital seventeen years; and is the consultant in mental diseases. He is consulting physician in mental and nervous diseases in the Newton Hospital. He has been a member, and secretary, of the Consulting Board of Physicians and Surgeons of the Westborough State Hospital since its establishment twenty years ago; but felt obliged to resign in January of this year, when appointed by the Governor a trustee of the hospital, and then elected chairman of the board, in April. He was employed by the trustees to assist in drawing plans and to locate buildings for the new State hospital for the insane, at Norwich, Connecticut, in 1903.

He is a member of the American Medico-Psychological Association, American Medical Association and Massachusetts Medical Society, American Institute of Homeopathy and Massachusetts Homeopathic Medical Society, and honorary member of the State Homeopathic Medical Societies of New York, Maine and Connecticut.

He married in 1879 Harriet Banks Gould, of Albany, and she died in 1905. He married in 1907 Martha Lee Gilmor, of New York City. Three children are living, two daughters and a son, and all have had a college education.

Address, West Newton, Mass.

Dr. Elbert T. Rulison, of Sacramento, Cal., writes: "Your invitation does not appeal to me—too far away, also too far away from '75. You ask for a history of my life. I will say that it has always been of great importance to me and that is the principal reason why I hang on to it so tenaciously. What my life has been to others is for others to say. I have retired from practice and am living with my son and daughter here in Sacramento. I expect to remain here until called hence by the 'man with the scythe.' Best wishes for a pleasant reunion."

Dr. A. V. H. Smyth is still practising at Amsterdam, N. Y.

Dr. William Stevens is in practice in New York City.

CLASS OF 1885.

Mr. President and Gentlemen: In gathering the following facts for this our thirtieth anniversary, I wrote to each member at his last known address. One letter was returned as address unknown, the letter was addressed to Dr. W. C. Fawdrey, Torraine, N. Y. Some of the members were slow in answering, and to those I sent a second letter but in some cases received no reply. It might be interesting to know that of the thirty-three members of the class, twenty-four located in New York State, three in Massachusetts, two in Pennsylvania, one in New Jersey, one in Illinois, one in Colorado, there seems however to be no record of Edward F. Brown.

Eight of our number have passed away, as follows: Ernest L. Angus, Colorado Springs, Colo., April 9th, 1892; Terence L. Carroll, Albany, N. Y., November 7th, 1913; David Gilliland, Utica, N. Y. (date not given), Josiah Hasbrouck, Port Ewen, N. Y., March 25th, 1913; Edwin A. Miller, Meredith, N. Y., November 6th, 1897; Hermann Palmer, Stuyvesant Falls, N. Y., March 3rd, 1886; Thomas P. Scully, Rome, N. Y., April 19th, 1911; Fred J. Tompkins, Lansingburgh, N. Y.

Martin Mac Harg,
Historian.

The members of the Class of 1885 were:

Isaac N. Albright, Chicago, Ill.
Ernest L. Angus, Colorado Springs, Colo., died April 9, 1892.
Samuel E. Armstrong, Rutherford, N. J.
Edward F. Brown.
Terence L. Carroll, Albany, N. Y., died November 7, 1913.
Andrew C. Crounse, Melrose, N. Y.
Sylvanius C. Curran, Hudson, N. Y.
Irving S. Edsall, Middleville, N. Y.
William C. Fawdery, Lorraine, N. Y.
Charles C. Flint, Lenox, Mass.
Charles W. Geel, Berlin, N. Y.
David Gilliland, Masonic Home, Utica, N. Y.
Robert G. Goudie, Lansingburgh, N. Y.
Alfredo N. Guffin, Carlisle, N. Y.
Josiah Hasbrouck, Port Ewen, N. Y., died March 25, 1913.
Alexander L. Johnson, Gloversville, N. Y.
Charles R. Knapp, Forest City, Pa.
Elmer E. Larkin, Plattsburgh, N. Y.
Albert Marsh, Wilmington, Mass.
James P. Marsh, Troy, N. Y.
Ralph A. McDougall, Duanesburgh, N. Y.
Martin McHarg, Albany, N. Y.
Edwin A. Miller, Meredith, N. Y.
Adelbert E. Moody, St. Regis Falls, N. Y.
Douglas C. Moriarta, Saratoga, N. Y.
Hermann Palmer, Stuyvesant Falls, N. Y., died March 3, 1886.
Silas H. Parks, Reading, Mass.
E. Hudson Rider, Albany, N. Y.
Thomas P. Scully, Rome, N. Y., died April 19, 1911.
George M. Stillman, Argyle, N. Y.
Fred J. Tompkins, Lansingburgh, N. Y., died August 12, 1901
John H. Van Rensselaer, Syracuse, N. Y.
Howard J. Wood, Brooklyn, N. Y.

Dr. F. N. Albright, Chicago, Ill., writes: "Your favor just at hand regarding the Alumni meeting. I regret that I shall not be able to meet with you. Kind wishes to each member."

Dr. S. E. Armstrong, Rutherford, N. J., writes: "In reply to yours of March 15th, will say that after graduation I located at Passaic, N. J. where I remained in practice until February, '88, when I came to Rutherford where I have since been engaged in general practice. Served several years on the health board of the town, and from February 1, 1912, to February 1, 1915, as county physician of Bergen county. Regret that I shall not be able to be present on Commencement this year. Most sincere regards to all old friends."

Dr. I. S. Edsall, of Middleville, N. Y., writes: "Yours at hand and you can rest assured that I will try and be with the Class of '85 at the annual meeting. I think that we all ought surely to be there if possible. Now as to what I have been doing since graduation: it seems hard to tell. Soon after graduation I located in Middleville, N. Y., and from that day to this I am still making my rounds, passing out the powders and pills. September 17, 1885 I was married to Ella Sikes of Prattsville, N. Y. We are still traveling the road together and have one son William, to bless our home. As to my success in a professional way: I will simply say I have thus far been able to keep the wolf from the door. I feel that I am somewhat useful to the community and have been honored by being president of the village. For the last fifteen years have been president of the board of education. Have been county physician about half of the time since I have been here. Am an ex-president of the Herkimer County Medical Society. Am member of Society of Greater New York, also of the A. M. A. and State Society. Have been on staff of Faxton Hospital of Utica for the past eighteen years. Most of the time I have found all the work I cared to do. And have been blessed with a fair degree of health most of the time and feel about as young to-day as when we received our parchment. Now hoping to see all the boys that are still left, together at the annual meeting, I will say that best effort will be made to be there. Have the boys bring the families."

Dr. C. W. Geel, of Berlin, N. Y., writes: "Below please find short sketch of my life since graduation. After graduating in March, 1885, I went to Berlin, N. Y., where I took up the practice of medicine. I still continue in the good work at the same place. I have met with a fair amount of success. I wish long life and happiness to all my classmates. I do not think I shall be present at the meeting. Best wishes for the continued welfare of all."

Dr. E. E. Larkin, of Plattsburgh, N. Y., writes: "After graduation I did my two years' stunt in the old Albany Hospital and started in practice at the corner of State and Eagle street; left Albany in 1893 and came to Plattsburgh, N. Y., where I have since resided. Am doing a general practice. Was married in 1897, have one son fourteen years of age."

Dr. R. A. McDougall, of Duanesburgh, N. Y., writes: "After thirty years of a very extensive country practice, I am still in the harness, young and vigorous as ever, with the expectations of rounding out another thirty years in the medical profession. Probably I have not attained as great fame as some of the class but have managed to enjoy life immensely doing my work in a modest way."

Dr. Martin MacHarg, Albany, N. Y., writes: "After graduation I located at Dunnsville, N. Y., where I remained for about a year, at the end of which time I came to Albany, N. Y., where I have been in general practice ever since. I think I can say that I have met with a good degree of success in my work. Have served as dispensary physician at the Albany Hospital for the past fifteen years. Am attending physician at St. Vincent's Male Orphan Asylum, and am examiner for several life insurance companies. Have served one year as vice-president of the Albany County Medical Society. In 1889 I married Miss Minetta Crounse of Altamont, N. Y. We have one son, twenty-two years of age."

Dr. James P. Marsh, Troy, N. Y., writes: "My professional life of thirty years has been spent in Troy where I have met with a fair degree of professional success. My practice is confined to surgery and I am a Fellow of the American College of Surgeons. I have a wife and one daughter. If possible, I shall be with you at the class reunion. The president of the class was Dr. Crounse, now located at Melrose, N. Y."

Dr. Edwin A. Miller, after graduation practiced at Meridale one year. March, 1886, went to Arena, Delaware County, N. Y., had a large country practice, held different political offices. In spring of 1895, he contracted pulmonary tuberculosis. He died November 6, 1897, aged forty years and nine months.

Dr. A. E. Moody, Dickinson Centre, N. Y., writes: "Regarding the history of my life since graduation, would say I spent the first year in a drug store at home in Saranac Lake and did some outside practice. I located in Moores, Clinton County, N. Y., in March, 1886, practised there about eight years when I moved to Isle La Motte, Vt. I had a fine practice there but had to leave on account of rheumatism. Have been here seven years. I am well and happy and have a good practice. 'Something doing' all of the time. Was married October 1886 to Jessie M. Churchill of Moores, N. Y. We have two sons, Ralph and Richard. I should enjoy bringing the boys to the reunion but have made arrangements to be in New York from April 28th to June 1st, for post-graduate work. Kindest regards to the boys of '85."

Dr. D. C. Moriarta, of Saratoga Springs, writes: "I find yours of March 10th on my desk on my return from a little outing. There is very little to add to the last history that I gave you. I am busy and happy and practicing medicine in the same old way and place. Perhaps the only thing that I could say that would be consoling is that I am just as poor as any of you, and Mrs. Moriarta might say 'just as cranky.'"

Dr. E. H. Rider, of Albany, N. Y., writes: "Graduated from the Albany Medical College in 1885, married and located in Rensselaer County where I practiced for ten years then came to Albany and continued general practice. In 1901 took a post graduate course in Germany. Served as clinical assistant at the Albany City Hospital and as city physician for eight years. Have been examining physician for three insurance companies. Am a member of several fraternities and clubs and am still pursuing my profession in good physical condition."

Dr. G. N. Stillman, Argyle, N. Y., writes: "What! has thirty years gone since we were studying in Albany Medical College trying to memorize the branches of the Inferior Maxillary Artery? Yes, the years have gone and what a change. Many of our professors have gone on before and some of our classmates. I little expected when I received my sheepskin March 4, 1885, that I would be practising medicine in the foothills of the Adirondacks thirty years from that time.

"After graduation, I located at Sand Lake, N. Y., but in six months I moved to Petersburg, N. Y., where for six years I worked like a beaver to pay my debts that I had contracted during my college career. Then I came to Argyle, N. Y., and have been here since. I have not made a large name for myself but have made that which is better, friends. In 1887, I married Artie L. Babcock of Berlin, N. Y., and from that union have two sons aged twenty-six and eighteen. My older son is a civil engineer and my younger son is taking an electrical engineering course in Union College. My practice is entirely in the country and driving a buzz wagon makes it easy to see patients ten miles away. My health has been good during these years. I want to be present at the reunion of our class and hope to see many of the boys."

Dr. J. H. Van Rensselaer, Syracuse, N. Y., writes: "After we graduated, the October following I entered the Albany Hospital and remained for a year and one-half, I then located in Oneonta, N. Y., and remained for ten years, then coming to Syracuse in the summer of 1897, previous to Syracuse I was elected coroner of Otsego County, which work I enjoyed immensely. I have never taken up any specialty, but remained in private practice since the time of my graduation."

Dr. H. J. Wood, of Brooklyn, N. Y., writes: "Having been on the sick list explains delay in answering your very welcome letter. I have nothing to add to my communication of ten years ago, excepting that I am still following a successful career in the general practice of medicine and surgery. My marriage to the daughter of Captain Wallace W. Crosley of Yarmouth resulted in two daughters born to us, who fill our cup of happiness to overflowing. Shall endeavor to attend our class reunion but if circumstances should prevent I hope you will remember me to the boys."

CLASS OF 1895.

John Marble Allen, East Rochester, N. Y.
Edwin Van Gaasbeek Baldwin, Fair Haven, Vt.
William Samuel Bristol, 356 Hudson Ave., Albany, N. Y.
Archibald Buchanan, Jr., 128 Third St., Troy, N. Y.
Charles Sylvester Butler, Harpersville, N. Y.
Thomas Michael Clarke, no known address.
Frederick William Cordes, 695 Bushwick St., Brooklyn, N. Y.
Francis Joseph Crummey, died December 17, 1913.
Alfred Desrochers, 16 Maple St., Adams, Mass.
David Damian Donovan, died October 27, 1899.
Charles Gartner, died July 25, 1914.
Archibald Gilbert, 35 Division St., Amsterdam, N. Y.
Harry DuBois Goethius, 447 Fort Washington Ave., N. Y. City.
Sherwood Aikler Haggerty, Richfield, N. Y.
William Dow Hardy, Endicott, N. Y.
Frank Hazelett Hursh, Guilderland Centre, N. Y.
Frank Gale Hyde, died in 1902.
Arthur Many Johnson, 63 Prince St., Rochester, N. Y.
Thomas Bassett Keyes, 108 No. State St., Chicago, Ill.
Durand Reed Kinlock, 12 Court St., Utica, N. Y.
Everett Starke Kinlock, 2432 Fifth Ave., Troy, N. Y.
Adelard Laurion, Jolliette, Prov. of Quebec, Canada.
Louis Oscar LeSieur, Rumford, Maine.
Peter James McGrath, Fourth and Main Sts., Los Angeles, Cal.
Edward N. Kirk Mears, Lowville, N. Y.
Howard Wm. Murphy, 75 Division St., Amsterdam, N. Y.
Charles Leonard Myers, 74 Clinton Ave., Albany, N. Y.
Samuel Pashley, Hartford, N. Y.
Edward Ferguson Pickford, 1010 E. Capitol St., Washington, D. C.
Lee Pultz, no known address.
Walter Kendrick Quackenbush, Trumansburg, N. Y.
William Monroe Repp, 388 Main St., Catskill, N. Y.
Frederick John Ressequie, 481 Broadway, Saratoga Springs, N. Y.
Arthur Thayer Robinson, died November 3, 1900.
Fred Sauerbrie, died April 2, 1905.
Reed Alonzo Sauter, 925 State St., Schenectady, N. Y.
Daniel Joseph Shay, Saratoga Springs, N. Y.
Leonard Gove Stanley, 2 Kenmore Place, Albany, N. Y.
Richard Llewellyn Stoddard, 77 Main St., E. Rochester, N. Y.
Harold Bishop Stowell, 14-15 Smith Bldg., Watertown, N. Y.
Herbert Nichols Tanner, died January 25, 1908.
Charles Rodman Townsend, 446 State St., Bridgeport, Conn.
Charles Haverly Turner, 957 College St., Elmira, N. Y.
Richard Fletcher Van Heusen, died June 16, 1913.
William James Wansboro, 113 Lark St., Albany, N. Y.
Charles Edward Weidman, Cottonwood, So. Dakota.
John Archibold Wilder, died September 14, 1911.

The Class of 1895, was graduated with forty-seven members. Have made a most strenuous effort to get a response from each known living member. Letters, postals, and telephone were used to the limit. Twenty-seven of known address responded, nine are known to be dead, two residence not known, two never practiced medicine, thirty-seven are known to be living, thirty-five practicing medicine. After all of my efforts nine of known address failed to answer by appeals. Of the living the historian knows twenty-six are married, having twenty-three children, not a very prolific bunch, two remain single.

From the efforts necessary to get a word from the members of this class, one must necessarily be led to believe that, either they are the busiest ever, or else are very indifferent to their classmates and to their Alma Mater.

While the Class of 1895 has not produced any very exceptionally bright or luminous star in the firmament of the medical profession, yet from all the historian can glean, the class as a whole reflect credit to their Alma Mater. From letters, short biographies follow.

John Marble Allen, East Rochester, N. Y.: Served one year in Ellis Hospital, Schenectady. There met the girl who later became his wife. First located in New York City where he attained a good practice, was influenced to move to Onaquaga, N. Y. After fourteen months here went to Geneva, N. Y. Was there interested in the Allen Drug Co. In 1898 located at Despatch, now East Rochester, N. Y. Has been one of the board of trustees of the village. Family consists of wife and a daughter of eighteen. Business is now satisfactory. Took a seven months' trip west and south last year. Hope to be present in May.

Edwin Van Gaasbeek Baldwin, Fair Haven, Vt., writes that first he located in Putnam, Pa., one year as assistant to a physician there in that mining town and gained good experience. Then located in Castleton, Vt. and last August after the death of my mother came to Fair Haven, Vt. Am not married. Do general practice and doing fairly well. Shall be there in May. Member of the Vermont State and the Rutland County Medical Societies. Examiner for several insurance companies.

William Samuel Bristol, 356 Hudson Ave., Albany, N. Y.: Began practicing in the fall of 1895 on South Ferry street, Albany. Since which time I have been located in Albany, at present on Hudson avenue. Enjoy a very successful practice. Examiner for several insurance companies. Coroner's physician two years. Was married in 1899; no children.

Archibald Buchanan, 128 Third St., Troy, N. Y.: Is still located where he opened his office twenty years ago. Was married in 1896. Has one daughter. Served two terms as coroner of Rensselaer County. Is enjoying both good health and a good practice. If all goes well will most likely meet the boys of '95 in May.

Charles Sylvester Butler, Harpursville, N. Y.: October following graduation, located at Nineveh, N. Y. In 1898 took a course in the

Polyclinic, New York City. Surgeon for the D. & H. R. R. Married Jessie Bushnell in 1899. Have one son. In 1903 located in Harpursville, N. Y. Have been a member of the State Legisature. Am doing a good and satisfactory business as a general practitioner. The world has treated myself and family well thus far. Shall be present on the twenty-fifth.

Thomas Michael Clark was reported to be in Chatham, N. Y., also in Springfield, Mass. Not found in either place, not given in any medical directory. I take it that he is either dead or not in practice.

Frederick William Cordes, 695 Bushwick Ave., Brooklyn, N. Y.: Practiced the first few years at Copake, N. Y. Tiring of country practice located in 1900 in Brooklyn. Am doing a general practice, contented and doing what I consider a good fair practice. Was married in 1909. Have enjoyed good health all these years. Hope to be in Albany the twenty-fifth.

Francis Joseph Crummey, B. S.: was located in New York City. Health failed him early and he came to Albany, then went to California and died in Los Angeles, December 17, 1913.

Alfred Desrochers, 16 Maple St., Adams, Mass.: Began practice in Adams soon after graduation and from the first day found work. Considers that he has succeeded remarkably well in every way. Obstetrics is my specialty, having assisted in 3,000 confinements in a town of 13,000. For fifteen years have been physician on the board of health. Member Berkshire Medical Association. Married in 1898, and have three children. Physician for insurance and local organizations. Surgeon for the Massachusetts Insurance Employees' Association. I shall be delighted to assist at the reunion in May.

Daniel Daiman Donovan died at Troy, N. Y., October 27, 1899, aged 23.

Charles Gartner, Ph. G.: Practiced successfully in Brooklyn, N. Y., until his health prevented. Died in the Lutheran Hospital, Brooklyn, July 25, 1914. Was married.

Archibald Gilbert, Ph. G., 35 Division St., Amsterdam, N. Y.: No response. Wrote in 1905, went to Germany for several months studying surgery and pathology. In 1896 located in Amsterdam, N. Y., where he is still practising. Member of the staff of the Amsterdam City Hospital and St. Mary's Hospital. Surgeon to a number of railroads. Member of City Medical Society. Am not married.

Harry DuBois Goetchius, 447 Fort Washington Ave., New York City: Served as interne and resident physician of the Lying-In Hospital in 1895. Appointed school inspector in 1896 and still in that department. Served several years as visiting obstetrician to the North Eastern Hospital. Attending laryngological department communicable pulmonary diseases. Married in 1895. Member of county and national medical societies. Still answering calls from my first office. Hope to be present on the twenty-fifth.

Sherwood Ackler Haggerty, Richfield, N. Y.: Located in Richfield, Otsego County, August following graduation, and am here yet. Have had a fair amount of success, a good practice, continue in good health. Am married and have one son eighteen years old. Do a general practice. Examiner for practically all insurance companies here. Have found pleasure and profit in the practice of medicine. Can not be present on the twenty-fifth.

Wm. Dow Hardy, Endicott, N. Y., was reported to be located at Union, N. Y. Is now at Endicott, N. Y. No response from him either in 1905 or 1915.

Frank Hazelett Hurst, Guilderland Centre, N. Y.: After graduation spent two and one-half years in Berlin, Vienna, Buda-Pest, Munich, Rome, Paris, Brussels, London and Edinboro studying. Opened an office on Eagle street, Albany, on my return. Acting as assistant demonstrator in the Bender Laboratory. Then practiced in Oneonta, N. Y., until 1903. Was physician to the Oneonta Hospital. Since then have been in practice here, with satisfactory results, financially and otherwise. Intend to go to Europe again soon this war is over. I promise to be in Albany at the reunion.

Frank Gale Hyde gave his attention to the specialties of eye and ear practice until he died in California in 1902.

Arthur Many Johnson, 63 Prince St., Rochester, N. Y.: After serving one year as interne in the Ellis Hospital, located in Rochester, N. Y., in 1896, doing a general practice. Appointed coroner's physician in 1898 and connected with that office until 1902, was then appointed to a position in the health department and am still here. Am examiner for an insurance company and railroad surgeon. In 1902 married Lucie E. Finch of Binghamton, N. Y. Have no children. Went to Europe in 1912 for study. Hope to be present in May.

Thomas Bassett Keyes, 108 No. State St., Chicago, Ill.: At present located at the above address. Has been located at Chicago since graduation and reports are that he is doing exceedingly well. No response either in 1905 or 1915.

Durand Reed Kinlock, 12 Court Street, Utica, N. Y.: Has practiced continually in Utica since September 1st, 1895. Fortune has favored me in many ways. Blessed me with a nice little family, a good wife, one girl and two boys. With such a family I ought to be happy. Albany College was my stepping stone to success. Member of the surgical staff Faxton Hospital. Assistant surgeon for New York Central, Delaware & Lackawanna and Western Railroad. Physician to the Utica Street Railroad Association. Am enjoying a good practice. Will try and be present on the twenty-fifth.

Everett Starke Kinlock, 2432 Fifth Ave., Troy, N. Y.: Located at the above address in 1895, my native town. Says he has worked like the devil, in general practice since. Wife says it's an awful game. Have been successful. Had two children before I graduated, two more have been added to the family since. The oldest girl married a physician. The oldest boy graduated from the Rensselaer Polytechnic Institute with honors, in the class of 1914. Hope to meet you in May.

Adelard Laurion, Jolliett, Province of Quebec, Canada: According to reports first practiced in New Bedford, Mass. Is now at the above address. No response from either place in 1905 or 1915. The present address was obtained through the courtesy of classmate Desrochers.

Louis Oscar LeSieur, Rumford, Maine: Located at above address. No reply to inquiry either in 1905 or 1915.

Peter James McGrath, Ph. G., Fourth and Main streets, Los Angeles, California: Have been all over the western country. Two trips to Alaska, the first with dog-drawn snow sleds. Thermometer down to fifty below, nearly lost my life. Three broken ribs and a fractured leg. Snowed in that winter on the Canadian side, finally came out in the fall. Have been in Mexico, Hawaiian Islands, Australia, our own Philippines (which I consider a very punk possession), Japan and then China. Am going to South America this year and on returning from Buenos Ayres will stop in New York. Impossible to be with you in person, but my spirit and good wishes are with you all.

Edward N. Kirk Mears, A. B., Lowville, N. Y.: Located in Albany until about 1907. Now at the above address. Is married, has no children. Is town and village health officer. Is a Mason. Has a good practice. Is secretary of the Lewis County Medical Society.

Howard Wm. Murphy, Ph. B., 75 Division St., Amsterdam, N. Y.: Served one year in St. Peter's Hospital. Several months in New York City in study. Located here in 1896. Engaged in general practice, with fair measure of success. Am married, have no children. Was city physician two years. Member of the staff of the Amsterdam City Hospital and physician to the Children's Home, positions I have occupied many years. Have been coroner of Montgomery County the last six years. Member of the city and county medical societies. Hope to be present on the twenty-fifth.

Charles Leonard Myers, A. B., 74 Clinton Ave., Albany, N. Y.: Located in Albany, N. Y., September, 1895, doing a general practice. Have been fairly successful as a physician, and have laid aside sufficient of the "filthy lucre" to keep me in comfort when my earning capacity is gone. Am married, no children. Have served as district physician and coroner's physician. Member of County, State and National Medical Societies. Member of the Masonic fraternity.

Samuel Pashley, Hartford, N. Y.: Located at Hartford, N. Y., since graduation. Worked hard in a small country town, supported myself and family comfortably and have laid aside a little. Have been a member of the board of education. In 1895 married Emma Moore and have a son seventeen years old and in September will doubtless go to Williams College. Shall endeavor to be present on the twenty-fifth.

Edward Ferguson Pickford, A. B., 1010 E. Capitol Street, Washington, D. C.: Writes that with him it is just the work and work of an ordinary general practitioner, enjoying it and life thoroughly. Am married and have a splendid boy in high school, who hopes to specialize in some branch of medicine. Probably can not be present on the twenty-fifth.

Lee Pultz, address not known. It is thought never practiced medicine. Was seen in Albany last winter. No response either in 1905 or 1915.

Walter Kendrick Quackenbush, Trumansburg, N. Y.: Began practice in Lansingburg, N. Y., serving on the medical staff of the Leonard Hospital. In 1900 located in Trenton, N. Y. There had a good practice, was health officer there. Severe illness obliged me to give up. Later was located at Utica, then Albion, N. Y. Became manager of a sanatarium which proved disastrous financially and physically. Later practiced in Medina, N. Y. Was doing nicely when again sickness compelled me to give up. Went south three and one-half years. Am now locating at the above address, hoping to make a success of it. Married while in Lansingburg and have two sons. It is doubtful if I can be at the reunion.

William Monroe Rapp, 388 Main Street, Catskill, N. Y.: First located at Alcove, N. Y., later Glens Falls. In 1900 went to Argyle, N. Y. Married in 1894. Have one son. Was county physician nine years and at one time village president in Argyle. Am in good health and busy. Am coroner of the county, secretary of the Greene County Auto Club and of the Greene County Anti-Tubercular Commission. Expect to be in Albany in May.

Frederic John Resseguie, 481 Broadway, Saratoga Springs, N. Y.: Spent the first year in the Albany Hospital, then located at the above address, where am still practicing. Joined the staff of the Saratoga Hospital in 1896 and have been visiting surgeon there since 1899. Married Helen J. Hanson in 1906. No children. Was elected coroner two years ago. Am president of the local medical society. Member of the State and National Medical Societies. Have been successful and am contented.

Arthur Thayer Robinson died in Mansfield, Mass., November 3rd, 1900.

Fred Sauerbrie had a lucrative practice in Clarksville, N. Y. Was married, had no children. He died April 2nd, 1905.

Reed Alonzo Sauter, Ph. G., 925 State Street, Schenectady, N. Y.: Served eighteen months in the old Albany Hospital, then located in my native city where I am still practicing. In 1900 married Anna Aussiker of Oneonta, N. Y. Have one daughter. My married life has been very happy, my wife is of inestimable value in my work. Have been quite successful, own our home and something laid aside for a "rainy day." Expect to be present Alumni day.

Daniel Joseph L. Shay, Saratoga Springs, N. Y., did not reply to inquiry. Never engaged in the practice of medicine.

Leonard Gove Stanley, 2 Kenmore Place, Albany, N. Y.: Began practice in Jersey City, N. J. After one and one-half years removed to Albany where he has since practiced. Prominent in amateur and professional theatrical and musical circles. Member and player in the Philharmonic Orchestra. Director and manager of the Empire Orchestra. Member of the U. S. Federation of Musicians. House physician and social director at summer hotels. Medical examiner for insurance and fraternal organizations. Past fleet surgeon of the A. Y. C. First vice-president of the Unconditional Republic Club. A member of several fraternal bodies. Married Ruth E. Leitzell and enjoys a good home and practice.

Richard Llewellyn Stoddard, 707 Main Street, E. Rochester, N. Y.: Writes in 1905 took care of a physician's practice, then remained home with an invalid mother till her death. Then served as interne in the Rochester City Hospital. In 1907 located in Rochester, N. Y. Do a general practice, also some surgery. No response in 1915.

Harold Bishop Stowell, 14-15 Smith Building, Watertown, N. Y.: Associated first with his father. In 1898 located at Lafargeville, N. Y. In 1899 married Amy M. Ford. Have one child. Was health officer here. In 1903 returned to Watertown, associating with father in the practice of medicine. Have been health officer of the town of Pamelia. Member of the Jefferson County and State Medical Societies. Examiner for several insurance companies. Belong to social organizations. Have a good practice. I look forward with pleasant anticipations to the date of the reunion.

Herbert Nichols Tanner was located at East Aurora, N. Y. Died in the Buffalo Hospital, January 25, 1908.

Charles Rodman Townsend, 446 State Street, Bridgeport, Conn. No response in 1905 or 1915.

Charles Haverly Turner, 957 College Ave., Elmira, N. Y.: First located at Charlotteville, then Ashland, then Meridian, N. Y. Have not seen a single classmate since graduation. In 1912 passed examination for prison physician and was appointed assistant prison physician at the Elmira Reformatory where I now am. Am married, have no children.

Richard Fletcher Van Heusen was located at Spokane, later in New York City, where he died June 16th, 1913. Was married and had one daughter.

William James Wansboro, 113 Lark St., Albany, N. Y.: Served one year in the Albany Hospital, then located at the above address. Married in 1899. Have two children, a boy fourteen and a girl of eight. Have been actively engaged in practice and feel that my success has been commensurate with my qualifications. You may guess whether this is a boost or a knock. Have been connected with hospitals and asylums in the city. Member of the County Medical Society. Shall be glad to meet the fellows at the reunion.

Charles Edward Weidman, Cottonwood, So. Dakota: Wrote in 1905 that he located at Gallupsville, N. Y., his native town. Married in 1896. No children. Was supervisor from 1896 to 1901. Vice-president of the Schoharie County Medical Society in 1903 and 1904 and now the president. Some ten years ago moved to the above address. No response in 1915.

John Archibold Wilder was professor of pathology and histology in a Denver college and considered one of the brightest practitioners in that city. Connected with many institutions and associations. Died September 14, 1911.

Nineteen of the class were present at the reunion and fifteen remained and were present at the Alumni banquet.

Charles Leonard Myers,
Class Historian.

CLASS OF 1905.

Was graduated with fifty-two men. Two men died, Drs. John D. Crane and A. C. Curtis. The rest are well, happy and prosperous. The histories are as follows:

R. C. Waterbury,
Historian.

The members of the Class of 1905 were:

Kenneth D. Blackfan, Johns Hopkins Hospital, Baltimore, Md.
James M. Boddy, St. Paul, Minn.
Homer A. Bushnell, North Adams, Mass.
George M. Casey, Sandy Hill, N. Y.
Archie B. Chappell, Middletown, N. Y.
Arthur P. Clark, New Hartford, N. Y.
Kenn R. Coffin, Morris, N. Y.
Miles J. Cornthwaite, Ballston Spa, N. Y.
John H. F. Coughlin, Troy, N. Y.
Walter A. Cowell, Olean, N. Y.
John D. Crane, died November 8, 1907.
Arrel C. Curtis, died.
Theodore D. Dockstader, Ravena, N. Y.
Patrick J. Donahoe, New Hartford, N. Y.
William M. Dwyer, Amsterdam, N. Y.
John P. Faber, Schenectady, N. Y.

Thomas J. Flynn, Jamaica.
Perla E. Garlock, Schenectady, N. Y.
William J. Garvey, Troy, N. Y.
Charles E. Green, Brooklyn, N. Y.
Fred F. Gremare, St. Regis Falls.
Charles W. L. Hacker, Albany, N. Y.
Walter E. Hays, 543 West 146th St., New York City.
Chester A. A. Hemstreet, Troy, N. Y.
Thurman A. Hull, Troy, N. Y.
Lemuel R. Hurlbut, Lockport, N. Y.
Frank J. Hurley, Bennington, Vt.
Matthew J. Keough, Cohoes, N. Y.
Oscar F. Larson, Jonesport, Me.
Edward Miltimore, New York City.
Francis J. Noonan, Troy, N. Y.
George W. Papen, Jr., Albany, N. Y.
Herbert B. Reece, 251 W. 50th St., New York City.
William G. Rommel, Coxsackie.
Henry S. Rowe.
Harry Rulison, Albany, N. Y.
Frank G. Schaible, New York City.
John R. Schermerhorn, Schenectady, N. Y.
Frederick F. Schirk, Mineola, N. Y.
Arthur H. Schuyler, Rochester, N. Y.
Francis J. Scott, Cohoes, N. Y.
Benjamin F. Seaman, Matteawan, N. Y.
Hamilton Southworth, Old Chatham, N. Y.
Charles W. Stratton, Lee, Mass.
Charles C. Sweet, Petersburg, N. Y.
James H. Van Buren, Jefferson, N. Y.
Edward H. Vines, Saratoga.
George Walrath, Port Richmond, N. Y.
Alfred Warner, Gallupville.
Roscoe C. Waterbury, Kinderhook, N. Y.
James W. White, New York City.
Edward B. Wilson, Brooklyn, N. Y.

Kenneth D. Blackfan, Johns Hopkins Hospital, Baltimore, Md.: After graduation I spent a year at the Bender Laboratory, Albany, N. Y., and for the following two years was in general practice at Cambridge, N. Y. Since then I have devoted my time to the study of the diseases of children which I am continuing in the department of pediatrics, at the Johns Hopkins University.

M. F. Cornthwaite, Ballston Spa, N. Y.: With the exception of a few months I spent in Schenectady, I have been practicing medicine in Ballston Spa and vicinity for the past nine years. Have taken one post-graduate course. Am married and have one son a year old.

Theodore D. Dockstader, cor. Pulver Ave. and Main St., Ravena, N. Y.: After graduation I first completed the State board examination and located in Ravena about the 15th of July, 1905. I have been in Ravena since and have had all that I could attend to at all times. Have tried to do good conscientious work and feel greatly repaid in every way. As far as I know at this time I expect to remain in Ravena. This village as you know is a railroad village or town and there are constant changes as many families come and go and in many instances take with them cash which rightfuly belongs to the poor doctors. In most of these cases we have to accept simply "thanks" for our work well done and forget it. Of course "thankfulness" is better than nothing but it does not go very far when there are bills to be settled. Soon after graduation I married Miss Margie M. King of Johnstown, N. Y. Have lived in the same house since coming to Ravena and about five years ago bought this house. Have a good wife and home and we are very happy and contented. After I had been in Ravena a few months I was taken ill with typhoid fever and was very sick. I can not help but speak of the gratitude I feel toward Drs. H. Judson Lipes and Albert Vander Veer—also Dr. L. O. White of Sharon Springs for the care given me at that time. I must especially mention Dr. Lipes who was with me at the very crisis of that illness and who remained with me night after night. They tell me I was desperately ill and I have not the slightest doubt of it. I went to my old home at Sharon Springs when I was taken ill and was there during my sickness. It was nearly a year before I was able to resume work. I have often thought of all the boys who graduated in 1905. I know where several are located but others I have never heard from since graduation. I hope to be present at the tenth reunion of our class.

Dr. **Patrick J. Donahoe**: "After graduation, in midsummer of same year I located at Hudson, N. Y. Not becoming wealthy in a few months, I went to the New York Post Graduate School and Hospital for a few months. From there I went to the Jersey City Hospital till early summer of 1906. In July of the same year I located at my present location (New Hartford, N. Y.). Since then my life has been that of the general practitioner with probably the usual number of successes and failures. But am enjoying a good practice now. I have a wife and two children, a boy and a girl.

Dr. **A. P. Clark**: "After graduation I located in New Hartford, N. Y., a town of 1,800. On August 31 I married Miss Mable Robinson of Watertown and we are now blessed with three children. We have a fine new home and other things that are needed to keep us happy and contented. I have been health officer of our town and village for seven years, also surgeon for New York State Railway. Do a lot of insurance work. Member of M. E. church. Fraternally I am past master of Amicable Lodge No. 664, F. & A. M. Active in Modern Woodman and Maccabees. Member of various medical societies."

Dr. Harry Rulison: "After graduation served as interne in St. Peter's Hospital, Albany, from 1905-6; 1906-7 was engaged in a general practice in Albany and served three years as surgical assistant to Dr. A. H. Traver. During this time I was instructor in clinical microscopy Albany Medical College, 1910-11 post-graduate work in clinics of Universities of Berlin, Munich and Vienna. Am now devoting my entire time to pediatrics. I am attending physician or specialist in diseases of children to childrens' clinic South End Dispensary, chairman Certified Milk Committee, Albany County, lecturer on diseases of children to Albany Guild Training School. Married Alice Potter in 1907 and have two sons."

Dr. H. M. Southworth: "After graduation located in Old Chatham, N. Y., where I am still doing a general practice, with all the hardship of a country practice. I have been very successful. Was married in 1907, and have three children."

Dr. William M. Dwyer, 99 Grove St., Amsterdam, N. Y.: "Graduate 1905, Albany Hospital and Bender Laboratory eleven months, started practice in Amsterdam 1906. President Class 1904. Charter member Omego Epsilon Phi. Special course eye, ear, nose and throat Philadelphia Polyclinic and New York Post Graduate. Eye, ear, nose and throat specialist specialist St. Mary's Hospital and City Hospital. Lecturer to nurses, City Hospital. Attending physician St. Mary's and City Hospital. Member A. M. A., New York State, Montgomery County and Amsterdam City Medical Societies, also Academy American Ophth. Nose and Throat Association."

W. J. Garvey: "Illness in family of long standing prevented my being present at class reunion. I am located at 134 Third street, Troy, N. Y., where I have been since graduation. Member of Rensselaer County Medical Society. Connected with Samaritan Hospital. Physician to Rensselaer County jail. Examiner to Maccabees, Protected Home Circle and physician to Order of Owls. Have been very successful and hope fortune has been kind to all members of Class of 1905."

Dr. C. W. Louis Hacker: "After leaving college I was an interne in Albany Hospital from June 1, 1905 to June 1, 1906. Resident pathologist at the Albany Hospital from June 1, 1906 to June 1, 1907. Assistant in surgical pathology at the Bender Laboratory from June 1, 1907 to June 1, 1908. Surgical interne (service of Dr. A. J. Ochmer) Augustana Hospital, Chicago, Ill., from July 1, 1908 to July 1, 1910. I now felt prepared to enter the professional arena. After due deliberation I decided that Detroit was the ideal place. After remaining there four months I had earned $8. I immediately bought a railroad ticket to Albany. I have been located in Albany since February 4, 1911, and have been practicing surgery. Business has increased slow but steadily. I am lecturer in surgical technique at the Albany Medical College. I am a member of the American College of Surgeons. On September 17, 1913, I married Miss Diefendorph of Salt Springville, N. Y. We have one son."

Dr. Walter E. Hays: "In October, 1905 went to Polyclinic Hospital, Philadelphia, for eighteen months' interneship. After that to the Manhattan Maternity Hospital, New York, for three months. In August, 1907, settled in Washington Heights, N. Y., for general practice, where I am still located. Have been a medical inspector with city department of health for some years past. For two years have been anesthetist in special clinic work under the city. Expect to do genito-urinary work entirely. Have a comfortable general practice at present. Have been married nearly seven years and have two boys. I am a member of the F. A. M.'s and several other fraternal orders."

Dr. Chester A. Hemstreet: "After graduation I served one year as interne in Saratoga Hospital, Saratoga Springs. Then started in general practice at Troy, N. Y., at which place I am still located, devoting Constance E. Cuthbert, R. N., of Saratoga Springs, and we have one son. I am member of Rensselaer County Medical Society, New York State Society and A. M. A. I am physician and surgeon to Rensselaer County Hospital, attending laryngological and rhinologist to Leonard Hospital, Troy. Have been reasonably successful."

Dr. Thurman A. Hull: "Entered Albany Hospital in 1905 as pathologist. Then went abroad and studied for several months, later becoming interne at Samaritan Hospital, Troy, N. Y. Became radiographer at Samaritan Hospital, Troy, in 1906, and still specialize in X-ray work at both Samaritan and Leonard Hospitals. Married Elizabeth Hall of Williamstown, Mass., in 1907, and in 1910 a daughter, Carolyn, was born. I am a member of Masons, Masonic Club, Pafract Dael Club, Republican Club, A. M. A., American Roentgen Ray Society. Also member of staff at Leonard Hospital. Was elected coroner of Rensselaer County in 1914.

Charles W. Stratton, Lee, Mass.: "Graduated in Class of 1905. After a year in Homeopathic Hospital settled in home town of Lee, Mass. Married June 30th, 1914."

M. J. Keough, 116 Main Street, Cohoes, N. Y.: "After graduation in May and successful in passing the State board in the same month, I went to New York and became substitute interne in the Hudson Street Hospital for the summer months. In November I took a post-graduate course in obstetrics in New York Lying-In Hospital. I opened an office in 1905 in Cohoes, N. Y., my native city, where I have been practicing medicine, surgery and obstetrics. In 1907 I went to Boston, Mass., and spent three months at Harvard Medical School studying children's diseases and physical diagnosis. In 1908 a post-graduate course in New York at New York Post Graduate School in medicine and surgery. In 1910 back to Harvard to study surgery and 1911 to New York for surgery at Bellevue Morgue with Dr. MacAllister. In September, 1913, I went to Europe and in Berlin and Vienna with its wealth of clinical material, especially in the latter place, I spent the greater part of my time in Vienna on medical, surgical and gynecological diagnoses. In

1906 I became an assistant on the medical and surgical staff of the Cohoes Hospital, and in 1914 I was appointed surgeon on the staff of the same hospital and lecturer to the Nurses Training School on gynecology and abdominal surgery. In 1914 I spent two weeks at the famous Mayo Clinic, at Rochester, Minn. I am known as a general practitioner, confining myself as stated above to medicine, surgery and obstetrics. In the ten years that I have been practicing my vacations have been spent in post-graduate work, which has repaid me in the successful practice that I have. Am unmarried."

James W. White, 139 E. 37th St., New York City: "1905 to 1906 Rural Grove, Montgomery County, N. Y.; 1906 to 1907 post-graduate work; 1907 to 1913 Fonda, N. Y.; 1913 New York City. Hospital appointments since in New York. 1913 New York Eye and Ear Infirmary; 1914 to 1915 post-graduate instructor Cornell Medical College; 1915 Herman Knapp Memorial Hospital; 1915 Vanderbilt Clinic. Have for the past one and one-half years been associated with Alexander Duane, M. D., since which time my work has been exclusively to the eye. Before that time was doing eye, ear, nose and throat."

Dr. H. B. Reese: "After graduation I did general work in Brooklyn for three years, after which I moved to New York in 1909 and devoted myself to genito-urinary work. I am a lecturer in the Polyclinic Medical School and Hospital, and an instructor in cystoscopy. I am married, and doing nicely."

Dr. W. G. Rommell: "After graduation I entered the Samaritan Hospital, Troy, as an interne. In February, 1906, I located in Grapeville, N. Y., remaining four years. In February, 1910, I moved to Coxsackie, where I am still located, and do a very nice business. I am examiner for several insurance companies. I am not married. Served as president of Greene County Medical Society in 1910."

Dr. Chas. C. Sweet: "Immediately after leaving college served as interne in Samaritan Hospital, Troy, for one year. Then took up general practice at Petersburgh, N. Y., for a few months. In autumn of 1906 came to Ossining, N. Y., where I have been doing general practice and surgery. In April, 1907, married Miss Monroe, assistant superintendent of Samaritan Hospital and have three fine children, two boys and a girl. In 1912 was appointed surgeon to Ossining Hospital."

Dr. Geo. Walrath: "I married Bertha Snell, and joined forces with my father at St. Johnsville, N. Y. February 1st, 1906 we moved to Mariner's Harbor, L. I. August 6, 1907, a daughter, Mildred, was born. November 1st, 1911, we moved to Port Richmond, Staten Island, where I am enjoying a large practice."

Dr. James H. Van Buren: "After graduation I returned to my native town and entered office of Dr. Hubbell, my preceptor, where I remained one year. I then opened an office in the same town. I remained here until 1907, when I moved to Prattsville, remaining here one year, and not making my expenses, I decided to seek a broader field, and moved to Oak Hill on April 1st, 1908. At this place my income exceeded my expenses. I remained here until October, 1913, when I received the appointment of junior assistant physician at the Craig Colony for Epileptics, where I am still located. I married Miss Lillian McTague of Albany, on February 19, 1906. Have no children."

Dr. R. C. Waterbury: "After leaving college I located in Averill Park, N. Y., where I remained until November 1st, 1906, when I moved to Kinderhook, N. Y., at which place I am still located, and have a good paying general practice. I am a past president of the Columbia County Medical Society, and at present secretary of the Third District Branch. I was coroner of Columbia County for one term, and at present health officer of Kinderhook village. I was president of the village of Kinderhook two years. And I am now president of the Kinderhook Automobile Club. I am a member of the several Masonic bodies, an Odd Fellow and Modern Woodman. I am examiner for several insurance companies. In August, 1907, I married Miss Ada Wild, of Averill Park, N. Y. We have no children as yet."

Dr. E. H. Vines: "After graduation I started practice in Albany, where I remained one year. From there I went to New Paltz for one year. Then I went to New York City and took up eye, ear, nose and throat work, and remained seven years. I came to Saratoga Spa, my home town in 1914 where I am at present. I married and have three children. I have held appointments in Post Graduate and Bellevue Hospitals of New York, also in Saratoga Cure and Infirmary. Examiner for several life insurance companies.'

A. H. Schuyler, 775 University Ave., Rochester, N. Y.: "Graduated 1905, went to Albany Hospital for one year, 1905 to 1906. Was in Dr. A. G. Root's office for four months. Came to Rochester in October, 1906. Married Clara Van Valkenburgh in December, 1906. Have one girl seven years old. Am practicing medicine and surgery and am doing real well."

The Nominating Committee submitted the following report by its Secretary, Dr. Ormsby:

For President

Dr. Maurice J. Lewi ('77), New York City.

For Vice-Presidents

Dr. R. B. Lamb ('91), Troy, N. Y.
Dr. G. G. Whitaker ('65), Fulton, N. Y.
Dr. Earl D. Fuller ('78), Utica, N. Y.
Dr. George W. E. Goodell ('94), Wayland, N. Y.
Dr. LaSalle Archambault ('02), Albany, N. Y.

For Recording Secretary

Dr. J. Montgomery Mosher ('89), Albany, N. Y.

For Corresponding Secretary

Dr. James N. Vander Veer ('63), Albany, N. Y.

For Treasurer

Dr. Robert Babcock ('84), Albany, N. Y.

For Historian

Dr. Arthur J. Bedell ('01), Albany, N. Y.

For Members of the Executive Committee (term three years)

Dr. William G. Lewi ('92), Albany, N. Y.
Dr. Alvah H. Traver ('98), Albany, N. Y.
Dr. Eugene E. Hinman ('99), Albany, N. Y.
Dr. Eddy S. Haswell ('09), Albany, N. Y.

On motion of Dr. Mereness the report was accepted and Dr. Crothers was directed to cast one ballot for the names contained in the report. Dr. Crothers then read these names and President Chase declared the members named in the report duly elected officers of the Association for their respective terms.

Announcements of the program of the day, the commencement exercises and alumni dinner having been made, and no further business appearing, the Association adjourned.

COMMENCEMENT EXERCISES.

The eighty-fourth commencement exercises of the Albany Medical College were held in the Auditorium of the New York State Education Building, on Tuesday afternoon, May 25, 1915, at three o'clock, in the presence of a large audience. Hon. Simon W. Rosendale, President of the Board of Trustees of the College, presided, and upon the stage were seated the members of the Faculty, officers of the Alumni Association, and prominent citizens.

The following was the

ORDER OF EXERCISES.

Hon. S. W. Rosendale, Presiding
President of Board of Trustees

Music—Selection, "Chin-Chin" .... *Caryll*
Prayer.................................. Rev. J. Addison Jones, D. D.
Music—Sextette, "Lucia" .... *Donizetti*
Essay.................................. Arthur Maultby Dickinson
Music—Excerpts, from the "Peasant Girl".................... *Friml*

Presentation of Candidates for Degree by Dean Tucker

CONFERRING DEGREES.

By Charles Alexander Richmond, D. D., LL. D.
Chancellor of the University.

Music—Waltz, "Cecile" .... *McKee*

ADDRESS TO THE GRADUATING CLASS

Rev. James S. Kittell, D. D.

Music—Fox Trot, "Kentucky Home"..................... *Platzmann*
Valedictory........................ Robert Cunningham Simpson, Jr.

REPORT ON PRIZES AND APPOINTMENTS.

Joseph D. Craig, M. D., Registrar.

Music—Finale, "Step Lively".............................. *Roberts*
(Holding's Orchestra.)

The Graduating Class was as follows:

Percy Huntly Austin.............................. Warrensburg, N. Y.
Walter Schneider Bennett.......................... Hartford, N. Y.
John Edward Burke.............................. Schenectady, N. Y.
*Edward Joseph Buxbaum.......................... Brooklyn, N. Y.
Hugh Smith Chidester.............................. Saugerties, N. Y.
Arthur Hiram Congdon.............................. Fort Plain, N. Y.
Albert Nelson Crouch.............................. Troy, N. Y.
Stephen Horace Curtis.............................. Troy, N. Y.
Gerald Edward Dailey.............................. Gloversville, N. Y.
Frank Edward Dean, Jr.......................... South Shaftsbury, Vt.
Irwin Van Olinda Decker.............................. Troy, N. Y.
Arthur Maultby Dickinson.............................. Albany, N. Y.
Francis Thomas Duffy.............................. Troy, N. Y.
James Manning Dunn.............................. Schenectady, N. Y.
Lawrence Joseph Early.............................. Schenectady, N. Y.
Frederick George Eaton....................... Saratoga Springs, N. Y.
Guy Fish .... Indian Lake, N. Y.
*Albion James Fitzgerald.............................. Albany, N. Y.
Leon Willis Green........................... East Springfield, N. Y.
William Lester Grogan.............................. Rome, N. Y.
Ralph Marsh Hall.............................. Albany, N. Y.
Raoul Albert Hebert.............................. Cohoes, N. Y.

John Edward Heslin	Saratoga Springs, N. Y.
Stanley Morton King	Urlton, N. Y.
James Sarsfield Lyons	Albany, N. Y.
*Wilbur Foster MacDonald	Schenectady, N. Y.
William Bernard McKeon	Troy, N. Y.
Joseph William Miller	New York, N. Y.
Martin Alvin Murphy	Hoosick Falls, N. Y.
William Francis Nealon	Hoosick Falls, N. Y.
Charles Luman Nichols	Philmont, N. Y.
John Joseph O'Connor	Albany, N. Y.
Jonathan Pearson, B. S	Schenectady, N. Y.
George Stiles Reitter	Stepney Depot, Conn.
Homer Isaac Rexford	Watervliet, N. Y.
Arthur Grant Rodgers, Jr	Rensselaer, N. Y.
William Joseph Ryan	Newport, N. Y.
Ernest Raymond Schilling	East Chatham, N. Y.
Benjamin Herman Shapiro	Glens Falls, N. Y.
Byron Gray Shults	Johnstown, N. Y.
Robert Cunningham Simpson, Jr	Boston, Mass.
William Patrick Sweeny	Saratoga Springs, N. Y.
Charles William Tomlinson	Troy, N. Y.
William Bernice Davidson Van Auken	Voorheesville, N. Y.
Leonard Kip Van Dyck, A. B	Syracuse, N. Y.
Herbert Austin Vogel	Albany, N. Y.
Fred Vosburgh	Cobleskill, N. Y.
Archibald Albert Walker	Callicoon, N. Y.
Bernath Weiss	Brooklyn, N. Y.
Joseph Wrana	Brooklyn, N. Y.

* Passed in 1914, but was not of legal age, and receives his diploma at this time.

Dr. Craig presented the prizes. He read a report on the Vander Poel Prize, endowed by Mrs. Gertrude W. Vander Poel, in memory of her husband, the late S. Oakley Vander Poel, for many years a professor in the College, stating that the prize, consisting of a clinical microscope and accessories, offered to the senior student passing the best bedside examination in general medicine, had been awarded to Dr. Arthur Maultby Dickinson, with honorable mention of Dr. Jonathan Pearson, B. S.

The prize offered by Drs. A. and E. A. Vander Veer for the best report of the surgical clinics was awarded to Dr. James S. Lyons. For the second best report of these clinics, the prize offered by Drs. Morrow and Traver was awarded to Dr. William B. D. Van Auken.

The prize, consisting of an ophthalmoscope, offered by Dr.

Merrill for the best final examination in ophthalmology, was awarded to Dr. James Sarsfield Lyons.

The Townsend Physiology Prize, endowed by the late Professor Franklin Townsend, Jr., M. D., was awarded to Mr. Edward Buckley Campbell, A. B., for passing the best examination in physiology at the end of the first year of study.

Dr. Boyd's Prize to the student passing the best final examination in obstetrics was awarded to Dr. Arthur Maultby Dickinson. Honorable mention to Dr. Joseph Wrana and Dr. John E. Burke.

Dr. Lempe's Prize for the best report of the lectures on second year Minor Surgery, was awarded to Mr. Leon C. Coté.

The Daggett Prize, consisting of sixty dollars, for the best "anatomical specimens," was awarded to Mr. Charles P. Archambeault and Mr. Anthony Pendola, and the second Daggett Prize, amounting to tihrty dollars, was awarded to Mr. Charles P. Archambeault and Mr. Anthony Pendola.

The Daggett first prize for the best "deportment irrespective of scholarship," consisting of sixty dollars, was awarded to Dr. Robert Cunningham Simpson, Jr., and the second prize, consisting of thirty dollars, was awarded to Dr. Fred Vosburgh.

The following hospital and laboratory appointments were announced:

Albany Hospital: Arthur Maultby Dickinson, Lawrence Joseph Early, John Edward Heslin, William Bernice Davidson Van Auken, Hugh Smith Chidester, Byron Gray Shults, James Sarsfield Lyons, Gerald Edward Dailey, Charles William Tomlinson.

St. Peter's Hospital: Ernest Raymond Schilling, Percy Huntly Austin, Fred Vosburgh.

Samaritan Hospital, Troy: Herbert Austin Vogel, Frank Edward Dean, Jr., Stephen Horace Curtis, Irwin Van Olinda Decker.

Troy Hospital: Francis Thomas Duffy, William Bernard McKeon, Raoul Albert Hebert, Leon Willis Green, Arthur Grant Rodgers, Jr.

Ellis Hospital, Schenectady: James Manning Dunn, Albert Nelson Crouch, Arthur Hiram Congdon.

Homeopathic Hospital: Charles Luman Nichols, John Joseph O'Connor, Homer Isaac Rexford.

Faxton Hospital, Utica: William Joseph Ryan, William Lester Grogan.

Glens Falls Hospital: Walter Schneider Bennett.

Gouverneur Hospital, New York City: William Francis Nealon, Martin Alvin Murphy.

Metropolitan Hospital, New York City: Robert Cunningham Simpson, Jr.

St. Mark's Hospital, New York City: Bernath Weiss.

Bellevue Hospital, New York City: Jonathan Pearson, William Patrick Sweeny.

St. Mary's Hospital, Jamaica: Joseph Wrana.

Methodist Episcopal Hospital, Brooklyn: Stanley Morton King.

St. John's Hospital, Brooklyn: Leonard Kip Van Dyck.

Central and Neurological Hospital, Blackwell's Island: Joseph William Miller.

Assistant to Dr, C. G. MacMullen, Schenectady: John Edward Burke.

Lying-In Hospital, New York City: Guy Fish.

New York Post Graduate Hospital: George Stiles Reitter.

St. Luke's Hospital, Utica: Benjamin Herman Shapiro.

Hampden Hospital, Springfield, Mass.: Archibald Albert Walker.

St. Francis' Hospital, Hartford, Conn.: Frederick George Eaton.

The Alumni Dinner.

The forty-second annual dinner of the Alumni Association was held at "Keeler's" on Tuesday evening, May 25, 1915, at nine o'clock. About one hundred and fifty were present, including members of the Association, guests and the graduating class.

The President-elect of the Association, Dr. M. J. Lewi, acted as toast-master, and addresses were made by Chancellor Richmond, Dr. A. R. Brubacher, the newly elected president of the State College for Teachers, Rev. Dr. James S. Kittell, Rev. Dr. J. Addison Jones and Dr. Frederic C. Curtis, who spoke feelingly of the serious illness of Dr. Samuel B. Ward, late Dean of the Faculty. Dr. James M. Dunn of the graduating class spoke as the orator of the class, and during the course of the dinner a silent toast was drunk in memory of the late Prof. Willis G. Macdonald.

Medical News

Edited by Arthur J. Bedell, M. D.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY.—A special meeting of the Medical Society of the County of Albany was held at the Medical Library, State Education Building, Tuesday, June 10, at 4.45 P. M. and action taken on the deaths of Drs. Samuel B. Ward and George G. Lempe.

MEDICAL SOCIETY OF THE COUNTY OF SCHENECTADY.—The regular semiannual meeting of the Medical Society of the County of Schenectady was held at Newman's Lake House, Saratoga Lake, Tuesday, June 15, 1915, at 1.30 P. M. Vice-President Dr. Albert Grussner read his address.

LONG ISLAND HOSPITAL FOR THE INSANE.—Governor Whitman has signed the legislative appropriation permitting the State Hospital Commission to enter into contracts for additional quarters for patients at the Long Island State Hospital to the amount of $400,000 of which $200,000 is available at once.

TYPHUS CHECKED.—Reports were received by the State Department in Washington, June 3, that the campaign against typhus in Siberia is going steadily forward and that the disease is being rapidly suppressed.

TUBERCULOSIS WARD FOR PENITENTIARY.—In the Clinton prison there are said to be 407 victims suffering from tuberculosis while there are only eighteen beds for tuberculosis patients. For this reason the governor has approved an appropriation for $75,000 for the erection of a general hospital containing a tuberculosis ward.

VACCINATION CAMPAIGN.—Under the title "The Mutilated Vaccination Law" a writer in the bulletin of the health department discusses the menace in the amendment of the vaccination law which does not make vaccination compulsory for school children excepting in cities of the first and second class "unless smallpox exists in any other city or school district or in the vicinity thereof and the State Commissioner of Health shall certify in writing to the school authorities" that smallpox exists. Under this law the school children of the city will be protected in a fairly satisfactory degree, but the adult population with its immense quota of immigrants and visitors is by no means protected. A vigorous campaign for the protection of the adult population will be conducted.

GORGAS PRIZE MEDAL.—This is to be awarded yearly by the Association of the Medical Reserve Corps, U. S. Army, New York State Division. The competition is open to medical officers of the army, officers of the Medical Reserve Corps of the Army and medical officers of the organized militia. The medal will be awarded for the paper submitted which shows the most important advance in medicine or surgery on a medical or medico-military subject, preference being given to the latter. The papers should be submitted by March 31 of each year and should be addressed to the president of the Board of Award, Gorgas Prize Medal, Army Medical School, Washington, D. C. The award will be announced at the graduation exercises of the Army Medical School on May 31st of each year.

PAYMENTS FOR BIRTHS AND DEATH RECORDS.—As the result of the enactment of an amendment to the health law which has been signed recently by the governor, physicians will receive a fee of twenty-five cents for each birth and death record filed. This, it is hoped will do away with the difficulties which have heretofore arisen from non-registration or improper or late registration of births and dates.

ANTI-VACCINATION BILL.—Kings County Medical Society and New York Medical Society are making efforts to induce Governor Whitman to veto the Tallet-Jones anti-vaccination bill which has passed both branches of the State Legislature and which proposes to abolish vaccination in cities of less than 50,000 population. It is feared that the passage of the bill will be followed by smallpox epidemics causing a loss of lives at present safeguarded.

MEDICAL CORPS OF THE UNITED STATES NAVY.—A candidate for appointment in the medical corps of the navy must be a citizen of the United States, between 21 and 30 years of age, a graduate of a reputable school of medicine, and must apply for permission to appear before a board of medical examiners. The application must be in the handwriting of the applicant, and must be accompanied by the following certificates:

(a) Letters or certificates from two or more persons of good repute, testifying from personal knowledge to good habits and moral character.

(b) A certificate to the effect that the applicant is a citizen of the United States.

(c) Certificate of preliminary education: The candidate must submit a certificate of graduation from an accepted high school or an acceptable equivalent.

(d) Certificate of medical education: This certificate should give the name of the school and the date of graduation.

(e) If the candidate has had hospital service or special educational or professional advantages, certificates to this effect, signed by the proper authorities, should also be forwarded.

The applicant will save unnecessary correspondence if he will make sure when submitting his application that the qualifications enumerated above are clearly and plainly described in his letters or certificates.

For further information address the Surgeon General, U. S. Navy, Navy Department, Washington, D. C.

PENNSYLVANIA STATE COMMISSIONER OF HEALTH.—Dr. Samuel G. Dixon has been appointed commissioner of health by Governor Brumbaugh.

This is Dr. Dixon's fourth appointment to this responsible position and within a few days he will have completed ten years of service in this office which is of such vital importance to the welfare of the people of the commonwealth.

Governor Pennypacker appointed Dr. Dixon on June 6th, 1905, shortly after the passage of the Act of Assembly creating the State Department of Health. He was re-appointed March 1st, 1907 by Governor Edwin S. Stuart and on March 1st, 1911 by Governor John K. Tener.

Under his able direction the Pennsylvania Department of Health has achieved first place among the public health organizations in this country and the work which has been accomplished has attracted attention at home and abroad.

At the present time the department has between three and four thousand employees and its activities reach to every section of the State.

In the campaign against tuberculosis, which ten years ago was the chief cause of death in Pennsylvania, one hundred and fifteen tuberculosis dispensaries have been established and three great State sanatoria at Mont Alto, Cresson and Hamburg have been constructed under the supervision of Dr. Dixon. In ten years tuberculosis has fallen from first to second place as a cause of death in this State and the rate is steadily declining year by year.

Four thousand deaths and forty thousand illnesses from typhoid fever was the annual toll exacted from Pennsylvania's citizens ten years ago. To-day this has been decreased more than seventy-five per cent and although in the meantime the population of the State has increased more than a million, the number of deaths from this cause is only one-fourth the former figure.

During the past year the death rate of 13.9 per thousand inhabitants was the lowest in the history of the State. More than seventy-eight thousand people are alive in Pennsylvania to-day, who would have died had the death rate of 1906 continued. Of these 78,916 lives, 40,528 have been saved by the reduction of four principal diseases.

Typhoid fever	18,865
Tuberculosis	11,924
Diphtheria	4,648
Whooping cough	4,091

During these years 1,767,000 babies have been born in Pennsylvania whose births have been recorded with all the facts concerning them, in the Bureau of Vital Statistics of the Department of Health.

Since its establishment the Pennsylvania department has served as a model for numerous other States that have desired to profit by the methods which have been here inaugurated.

PERSONALS.—Dr. A. B. BOWEN (A. M. C. '68), is located at Maquoketa, Iowa.

—Dr. D. S. FAIRCHILD (A. M. C. '68), is practising at Clinton, Iowa.

—Dr. Edgar A. Vander Veer (A. M. C. '98), Albany, has been elected president of Bender Hygienic Laboratory, Albany, N. Y.

—Dr. James W. White (A. M. C. '05), is engaged in practice at 139 East 37th St., New York City.

—Dr. Neil B. Palen (A. M. C. '09), is located at Walden, N. Y.

—Dr. Frederick E. Vaughan (A. M. C. '09), is practising at Mt. Kisco, N. Y.

—Dr. Ward W. Milias (A. M. C. '12), has resigned as assistant superintendent of the West Haverstraw Hospital for Crippled Children to accept a position in the Custodial Asylum in Rome.

—Dr. Abraham Ball (A. M. C. '14), has opened an office at 8 Ash Grove Place, Albany, N. Y.

—Dr. Wilbur S. Newell (A. M. C. '14), is located at 602 Midland Ave., Syracuse, N. Y.

—Dr. Ralph Hall (A. M. C. '15), has opened an office at Broadalbin, N. Y.

—Dr. Charles L. Myers (A. M. C. '95), Albany, has been elected secretary and historian of the Class of 1895.

Died.—Dr. Samuel B. Ward, Dean and Professor of Medicine of the Albany Medical College, died at his home in Albany, N. Y., June 3rd, after a long illness, aged 73 years.

In Memoriam

Ianthus G. Johnson, M. D.

Dr. Ianthus G. Johnson, one of the oldest and best known physicians of Saratoga county, died May 31st, 1915, at his home in the town of Greenfield, N. Y., having attained the age of eighty-six.

Dr. Johnson's ancestry were Scotch, his great grandfather having settled in Rhode Island in the year 1700, and his father, Darius Johnson was a physician. Dr. Johnson was educated in the Greenfield schools and after studying medicine with his father, he graduated from the Albany Medical College in 1853. He had practiced in Greenfield since that time with the exception of a few years spent in Washington county and Dundee, Illinois. He was a Republican and served the town of Greenfield as supervisor two years. Dr. Johnson was a member of the New York State Medical Society and the Saratoga County Medical Society. He was a prominent Mason, being a member of St. John's Lodge, No. 22, F. and A. M., St. John's chapter, No. 103, R. A. M., and Washington Commandery, No. 33, K. T., in which he was knighted January 3, 1866, being one of the oldest sir knights of the commandery.

On December 17, 1862, Dr. Johnson married Amanda F. Wing of Stillwater. To them two sons were born, Dr. Arthur W. Johnson of Mechanicville and Byron S. Johnson of Saratoga, both of whom survive.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

Guiding Principles in Surgical Practice. By Frederick-Emil Neef, B. S., M. L., M. D., New York City. Duodecimo; 180 pages; illustrated. New York, Surgery Publishing Company, 1914.

This small book of fourteen chapters is an outline of the subject of surgical technic. It apparently is not intended as a work for the specialist in surgery, but more as a working-guide for the younger man about to begin surgical practice. The book is very well written, printed on excellent paper, and has attractively arranged marginal titles in red ink. The reading is pleasant and instructive to those for whom the book is intended. T. L.

Ten Sex Talks to Girls (14 Years and Older). By Irving David Steinhardt, M. D., author of "Ten Sex Talks to Boys" (14 Years and Older). Instructor in Clinical Surgery and Assistant Surgeon, Cornell University Medical School; Assistant Pediatrist, Mount Sinai Hospital, O. P. D., New York City; Orthopedic Surgeon, New York Hospital, O. P. D., and Bronx Hospital and Dispensary; First Lieutenant, Medical Reserve Corps, U. S. A., Member American Medical Association; the American Society of Moral and Sanitary Prophylaxis; and the American Academy of Political and Social Science. Philadelphia and London, J. B. Lippincott Company.

This book of 193 pages and six illustrations should prove very interesting and instructive to those interested in the topics considered.

The work covers a wider scope than most of the recent works on this subject, and the author states in the preface, that he hopes this litle book will do something towards saving our girls, little and big, from wrong-doing and disgrace, and make of them better daughters, wives and mothers.

As far as possible, the discussions are in non-technical terms.

The book is to be recommended as one which covers thoroughly the purpose for which it is intended. T. L.

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ALBANY
MEDICAL ANNALS

Original Communications

RUGGED PSYCHOLOGICAL TREATMENT OF THE NEUROTIC.

Read before the Medical Society of the County of Rensselaer, April 13, 1915.

BY GEORGE M. PARKER, M. D.

An implication exists in this title that the psychological treatment of the neurotic is not always rugged. This implication is true. The usual methods have involved a rather tender consideration of the patient as a sensitive soul, not understood, for whom a finer and closer wool is needed to exclude the bitter winds of life. The rigors of the rest-cure, the bitter exigencies of travel in care-free lands, the sternness of a non-economic vocational strife, here are the marches of harshness in the country of the neurotic. The methods of earlier psycho-therapy have been but little less easy. Hypnosis or hypnoidal states, whatever be the terminologies and categories of their users, emphasize the work by the physician; the patient is limited to so strenuous a participation as lying upon a couch. The mists of re-education enclose a distinguishable didactic relation of a teacher to a single scholar, an exclusive tutorial scheme, in which, as usual, the scholar is saved from any severe self-exploration or confrontation.

For all of this wrong conceptions of pathology are responsible. Largely the evil here has been due to a literal translation of a physical pathology into a mental pathology. A neurosis had come to be viewed as a growth or structure or a condition independent of the individual's ordinary adaptations as a physical neoplasm. Naturally, then, the patient might neither eradicate this himself nor assist in the eradication. Doubtless the persistency of these concepts, their undue influence, must find a reason in their striking illumination and definition of a field hitherto obscure. Only this could have served to blur the essential empiricism which has seen always the neurosis as a variant of human conduct, woven in and out of the individual's texture; no incapsulated disease process, but a continuous range of conduct, for which society has held the individual, in part at least, responsible. Indeed, society's treatment of the neurotic has always been a bit rugged, yet with no definite benefit save to society. This, however, is a way society has.

The real point lying behind society's effort is that the individual must aid. Society largely fails because she cannot help the neurotic to help himself. This despite the power of her demands in a similar direction. One then must add toward the solution of this problem such measures as may open to the neurotic this road to self help and adjustment. A certain emphasis has been laid upon the relations of the neurotic to the social body implied in the demands of the latter upon the former. On this not extensive platform we may now extend our concepts of the neurosis.

Society demands from all an adjustment to herself. This is the main purpose of life. It comprehends all our conscious modes and attitudes. No adjustment is ever complete or perfect. There is a wide range, but within this range we must stand or be penalized by society.

Our consciousness, then, is developed with this adaptation to reality as its sole purpose. Yet if consciousness fail in this adaptation, as in greater or less degree it does fail with us all, to what may we then ascribe this failure?

It is a little easier to answer this question by extracting from consciousness, rather artificially, that which we call purpose. We may then say that if this main purpose of life toward adjustment halt or be imperfect, a fair assumption would rest in suspecting a purpose existent elsewhere, moving in an opposite direction, away from reality. Because, however, this movement is away from reality, we may know that it does not reside in consciousness, at least that consciousness which involves the awareness of reality and the adjustment to reality.

We are then confronted with the necessity of conceiving a consciousness which does not adjust to reality and in which we assume a movement toward a goal, the antithesis of reality. It is a sardonic reflection upon our materialism which the term unconscious suggests as a description of this part of consciousness which does not bow to the material obligation of a real world. Without going farther into the psychology of the unconscious at this moment let there be emphasized as the chief criterion a movement in a different direction and toward a different goal than reality. This is all that the unconscious represents.

On this pattern of the conscious and the unconscious, representing two diverse purposes, reality and non-reality, neurosis may now be stretched. If there fail an adjustment to life and reality we must then search for its production within that other range termed the unconscious, wherein the movement is toward another goal. We may expect to see in such adjustments as the neurotic may manage, a rather definite series of compromises between the two goals expressed in attitudes and conduct of the individual. They will seem rather more familiar if we continue to call them symptoms. Finally, with so plain a pattern constructed with so few lines, consisting of two divergent movements we may expect to see some distinct adjustments conducted by the individual. The basis for this readjustment must plainly lie in the abandonment of that goal which is not reality. A direction of such an attempt we shall see to be the only function of the analyst, the physician.

It is obvious that the nub of the situation lies in that which we call the unconscious. Here we need data to make a context for that movement away from reality, pursued in consciousness. Freud's greatest contribution has been the presentation of the dream as a fertile expression of this desired data. It has been invalidated badly and unfortunately by the entirely wrong concept of purpose, namely, sex, which Freud has predicated as the unconscious goal. It has all the characteristics of a special pleading, entertaining and unconvincing. It is, perhaps, diverting to see poured forth from a word or phrase a hidden and repressed soul, for to Freud all words are " cups in to which has flowed the history of man " and this history is Libido Sexualis. So a dream recapitulates the history of the dreamer and the race and tells this history in terms of sex. Yet we feel it possible to believe that the appearance of arrangements and presentations in the dream indicates, indeed, a selection of material for a purpose and yet deny that this purpose is of that kind which demands for its clarification any amplifying out of the deposits of philology, anthropology, folk-lore into which the Freudians' special pleading of a repressed sex libido has driven the nose for a justification of an essentially false theory. We consider it possible that the dream shows some mode of escape from reality in the unconscious; that its presentation encloses a purpose which reality would not permit; but we deny this purpose to be a sexual libido in its ultimate generalizations in any dream or in any circumstances. We insist that the unconscious in the dream uses the same modes of thought as the conscious. It appears, too, a little like invoking a Daimon within us when we meet the brilliant condensations, dramatizations, elaborations which Freud attributes to the unconscious; it really seems possible to discern in these constructions just those methods which we recognize as having a part in the daily earning of our bread, save that in the dream this quite matter-of-fact purpose of adjustment to these needs is nobly overlooked. The Censor, Freud's Prussian Corporal, who blocks the emergence in the land of the "Fore-Conscious," into which, perhaps, Alice stepped beyond her looking glass, him also we regard as factitious but delightful, for we believe a better and less anthromorphic picture ought to be presented, even though the terms were more biological than personal. Yet we cannot at this time criticize a theory which has had the greatest value. The few expressions, which have been permitted, are solely to define the fact that our efforts shall rather handle the dreams as carriers and exponents of another purpose than that of Freuds and that this purpose may be discerned quite as clearly as the ordinary description obtaining in ordinary life of any ordinary event. Before defining this purpose by its localization in the unconscious, it will be wiser to consider it in its origins apart from locality. The relations between conscious and unconscious later will gain by this method.

We may say that this purpose is one involved in *relations* of terms, not in the terms themselves. That is, we shall see it most clearly if we consider the relations between A and B and not either A or B as single terms. Freud's error may be seen, in one way, as having made his centre in the *term*—sex. He missed the perception of the relations, as relations, in their presentation in *any* pair of terms. It is not the terms, these may be varied; but the relations between the terms which are invariable and constant. In these relations, then, one is to read purpose, for here is the constant. We may now define the relation. $A > B$ or $A < B$; one term is either greater or less than the other. Organic life knows no exact equivalent. Life may be said always to proceed with a series of relations in which the movement is from < to >, from less to greater; it matters not what are the terms carrying these relations; always this relation presents. Also always it begin with <, with an inferiority. Adler has taken in his Organische Minderwertigkeiten these < and has shown the necessitous change toward >. Somewhat less clearly he has seen the transposition of these relations between organic terms into the social life of the individual where the same relations obtain. Yet it is at this point that the structure appears in a verifiable form, in earliest social structures but written in the same relations as in the organic life of the individual.

We may now substitute for <, inferiority, for >, supremacy. That is, life has that relation between all its terms, of a movement from inferiority to supremacy. There is no expression of life which does not show this, from a tropism to a class invasion. The goal, then, is always supremacy, from an inferiority and because of the inferiority. It is the inferiority which drives to the compensation or over-compensation, supremacy.

The emphasis is now shifted to the supremacy. As a relation between terms it is as unequal, unstable and as non-adaptive as inferiority. Because of this it is never attainable. Reality, cast in the mold of society, attends to that. To adjust to society, to sacrifice to Themis, one may not hold to a supremacy. Yet this fundamental relation of life, that has been seen between all life's terms, is too strong to cease. It continues operative, where it may not be assailed, in that part of life where reality obtrudes least, in the unconscious. Here is the home of supremacy, the ultimate goal which has appeared as the constant relation existing in every set of those terms which make up the individual's adjustments to society.

This, then, the dream will be expected to show. This is the data. We should now be able to estimate, to get its distance from reality, to see how far it has subtly interpenetrated society, how stiffly it has been coerced by society or reality. We shall see this relation in a variety of terms, not in a forced and illogical formulation which bears not upon relations but upon terms and a particular term, sex. Indeed, the terms will be seen as of secondary importance; the relation expressed in the figure of supremacy is the centre of each dream presented. Thus read. the dream may well be stripped for exposition down to as clear a meaning as any conscious expression. The motivation, formulated in the relation, is the sole differential.

To show this supremacy in striking form, the first two dreams are presented.

Dream A:

" Patient sits before a dish of oysters not on the shell. Immediately they begin a series of evolutions before him, signifying great respect, veneration and appreciation of him."

In the Little Flowers of Saint Francis one recalls the genuflections of the fish before the good saint. In the dream A a less religious though no less reverential attitude is expressed by the humble oyster. The Anthropomorphic assumption is dislocated by a matter of a few centuries, but the supremacy of the dreamer is quite as frank and patent and in this year of our Lord hopelessly out of touch with reality.

Dream B:

" Patient sees the world divided in half by a white highway. On one side of this are all from the east, on other side all from the west. Each half displaying all their finery and wealth. The respective kings and rulers of each side would move forward near to the line, yet never cross it. Above all the rulers on the side of the east was a copper colored giant in Persian dress. The patient's rank in the west was as the giants in the east. He and the giant in a series of evolutions each passed over the line, they being the only ones who did thus."

The political supremacy, exercised by the dreamer, possesses a majestic inclusiveness. Kings and potentates are less than he, while the color of his eastern rival subtly defines an inferiority to him, the light skinned head of the Occident. The supremacy is world-wide, "uber Alles." Both dreams are non-adaptive to reality; both aim toward a goal, the complete anti-thesis of conscious purpose. Yet, plainly it is not in the terms, but in the relations between the terms, between the dreamer and the world, here it is that the supremacy lies. The dreamer is greater, as A>B.

It might, however, be said that the particular terms here do carry prestige or power and that power is itself a supremacy. The following dream is presented to show that other qualities may adhere to the terms, with no disturbance of the fundamental relation, which is the true carrier of the supremacy.

Dream C:

"Patient sees a large stone boat, filled with stones. Many men are pulling it by a rope attached to the boat. They are pulling together. The patient has a rope which he is pulling, but this is attached to the side at such an angle that he is not only pulling the weight of the boat, but is also pulling, in a way, against the others, thus making his effort greater. But more than this, between himself and the boat there is interposed a huge millstone, which he must drag in addition to the boat's load."

Here the relation between the terms is still supremacy, but a supremacy of one who bears the greatest of burden. A system of religious belief has within its convolutions a similar supremacy of a supreme burden bearer. Yet, without this knowledge, without a Nietsches "Terrible Meek," with no attention paid to the terms, the relation stands out clean cut as a supremacy, unfit and non-adaptive.

Another variety of relation is seen within the next dream. Here the first term becomes the greater, not through its compensation, but by way of a diminution of the second. A depreciation of the second means a relative appreciation of the first; but it is still expressed in the relation between the terms not in the quality of the terms. In this particular dream we shall meet an example of this mode in expressing the relation where the terms are man and woman. It is, of course, an original pairing of terms, yet one where the terms have received so high a light from the Freudians that the fundamental relation involved has been lost to view. Here Freud has seen only Libido

Sexualis, of the man and the woman. He has quite failed to discern the relation, no better expressed in sex terms than in other social attitudes seen in the preceding dreams.

Dream D:

"Patient saw a hat and tried it on. It was pink and soft. She did not like it, but replaced on her head her own hat which was shaped like a helmet. She then went inside to see a gown. The room held men knitting. The dressmaker said, "this is the way to treat male relatives." A man's coat hung there. Patient tried it on; it fitted her well."

The soft pink hat, the helmet are the first set of terms. The helmet is to be preferred; it is the greater with its masculine implications. Next the knitting men, the non-knitting women; the latter again greater in a masculine supremacy. Man's coat, woman's wearing it; a third set of terms in which the woman again has the masculine prerogative. Yet, here throughout is a supremacy which is not attainable in reality. Woman is woman and man is man; but the masculine supremacy, here seized by woman, has carried with it the historical though wrong advantage which has accrued to man. Going further, moreover, the relation shows that man is placed as the inferior in a reversal of terms by which the woman is to be the greater. This as ill and unreal a correspondence as that which society has always tolerated in the existing relations between the man and woman term. It is attained by the lessening of one member, involving the increase of the other. It is an enhancement obtained through depreciation, through attack. It is the pattern of the anti-social. It is the mode of violence and aggression. Absolute and untempered, it can never adjust; relative and controlled, it has been the driving force at certain stages of society.

These few and simple dreams must serve to expound the general purpose. They are insufficient. The analyses have been brief. They have shown none of the involved and obscure nuances covering the way between the inferiority and the supremacy, none of the diversified content of the terms, none of the individual modes of thought. They have been quite frankly didactic. But this has served to define the inevitable relation upon which all stress has been laid. In a way this definition carries the lines of a cartoon, in a grossness and what might seem to be an over-emphasis. But just this, a cartoon, the dream in a neurosis is. It is the cartoon of a mechanism which, in less violent terms, expresses a similar relation in all men, but one which does not prevent an adaptation to reality.

In all this one should see the fundamental pattern upon which society is molded; this relation between the conscious and the unconscious. If reality, as the conscious goal, is greater and steadily greater, we get something we call a normal because largely he adjusts. If the goal of the unconscious obtain, there appear the non-adaptive, the psychoses, the criminal, the neurotic.

This being the case, where should treatment lie? In the adjustment to the conscious goal, reality. And this is rugged in plenty. It is not easy to give up the lotus for boiled potatoes. Courage and some honesty are required and at times these qualities require a considerable cultivation. The tenaciousness with which the cosmogony of the unconscious adheres is unbelievable, for, after all, it has been the individual's best chance in getting by. Disarmament in the single social unit is only less difficult than in the sphere of Weltpolitik where we know the adjustment is frightfully raw. But it can be done. A cure in the strictest sense of the word can eventuate. This lies in the destruction of the unconscious goal. We compass this by dragging forth to the adjustments of reality the dream data, which encloses in its manifold terms the relation which we have called a supremacy. But it is not what we call it which takes away its curse; it is the reiterated evidence given to the patient by himself, with all the certainty of a birth, in a form, day after day, compelling belief; out of this a conviction which demands a better striving and a closer approximation. The job of the analyst is to show the way and to drive his man, but only with the momentum of this man, in that way. He can put none of himself in it, but he can block the way back. With a proper knowledge of the dream in the broad relation of purpose one may follow the evolution of a neurosis in as exact a manner as the bedside observer pursues the course of a febrile disturbance. He holds the lines in his hands, which, though less beautiful and restful than lying in the "laps of the Gods," we conceive to be considerably better for the patient.

THE EVIDENCE OF IMMUNITY IN TUBERCULOSIS.
THE DEVELOPMENT OF PHTHISIS.
THE FIRST INFECTION—THE SECOND INFECTION.

Read before the Medical Society of the County of Rensselaer, April 13, 1915,

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At present what is our medical knowledge of tuberculosis? What is its clinical development? What is its source? What governs the changes in course?

The history of the disease from Lannaec to Villemin is one of the reduction of tuberculosis from an anatomical and cellular study to one of transmissible disease. From Villemin to Koch, from transmissible disease to infectious etiology. From 1882 to 1890, the strife between the German and French settled itself when it was discovered that each was working a different strain of tubercle bacillus from the other.

In 1890 Koch again startled the world with tuberculin and the announcement of its curative action, and further, what is now known as more important, the fact that an already tuberculous animal was relatively insusceptible to a new infection, and that this new infection tended to be stationary, to retrogress, and to heal. In 1895 the work of Theobald Smith on the Bovine Tubercle Bacillus became known, and in 1900 again Koch established himself with the announcement of the different identity of the Bovine and Human Tubercle Bacillus and the non-infectious nature of the one bacillus for the opposite species. (Koch.)

This same year Richet in his work with actinia on dogs announced a new reaction to which he gave the name anaphylaxis and, previously in 1898, Theobald Smith, in conversation with Ehrlich, explained a peculiar reaction that occurred in guinea pigs on the second injection of horse diphtheria antitoxin, or what became known in laboratory language as "The used pig reaction." Ehrlich on his return set Otto to work upon this Theobald Smith "Phenomenon," and upon the ideas of Theobald Smith and Richet the tremendous literature of Anaphylaxis has been developed.

The outline of this work might reduce all proteid of whatever source, bacterial or otherwise, that might find entrance to the body as the sensitizers. After a pause of about 10 days—which might be called the incubation period—a changed state occurs, and upon the reinjection or re-entrance into the body of the same sensitizer, a different reaction takes place. This different reaction is possible because the body is in a state able to react or the Allergic state, as called. This Allergic or Hypersensitive state enables the patient to react at once upon the reintroduction of the foreign proteid.

Anaphylaxis and Allergy explain many reactions in infection—explain the first introduction of the bacteria—the pause or latent or incubation period, the explosive outbreak or clinical onset, the fever (Vaughn can reproduce the typhoid chart with simple proteids like egg white), the terminations, the changed reaction or allergic state that is one of the subsequent manifestations of immunity, and that protects against a second invasion.

The theories of Allergy are enumerated by Wolff Eisner in his exhaustive work on Serum Sickness; by Vaughn and Wheeler, by Friedberger, by V. Behring, and by Pfeiffer.

The systematic outline of the development of Allergy is necessary in tuberculosis because it may explain the difference seen in clinical tuberculosis,—

in 1. Miliary Tuberculosis.
2. Chronic Ulcerative Tuberculosis and stages between 1 and 2.
3. Cheesy Pneumonia.

What are the factors in tuberculosis immunity, and what are the factors that enter into the genesis of a clinical tuberculosis?

Under the present epidemological relations almost every human body suffers from a tuberculous infection, and this occurs before the 14th year, as demonstrated by Wolff-Eisner, and Hamberger.

It is experimentally demonstrated by Koch and elaborated in wonderful detail by Romer, that an already tuberculous animal possesses a marked immunity against a new infection, and that small reinfections are, as a rule, completely harmless. In human beings it is reasonable to suppose that if the person has once been infected, and in at least 50 per cent of the cases the source is unknown, it is just as possible for the individual to again pick up at unknown times and places additional infections which may be great or slight.

If a person were as sensitive to reinfections as to the first infection at autopsy we must find a larger number of evidences of this reinfection than we do. Often, however, only one such localization is found.

The sum of the experimental work in animals which makes it possible to parallel human disease shows us that while most people suffer from the tuberculous infection, as evidenced by the tuberculin reaction, and that they must at times be infected remain for the most part healthy and seem protected to a great extent from the results of an unavoidable reinfection.

This is, however, the negative side of the question, namely, *why so many men, in spite of the general opportunity to get infected, do not become clinical cases.* The converse also emphasizes itself: *Why do so many become tuberculous?* What then, in the presence of so much infection, is the real cause of the development of clinical tuberculosis?

The original uncontradicted dogma of the development of tuberculosis was that it occurred through the inhalation of tubercle bacilli in suspension in the breathed-in air.

This was controverted by V. Behring who advanced the hypothesis that the cause of tuberculosis originated in childhood and that the lung tuberculosis as we know it and saw it was merely the recognized clinical end of a long story, the first chapters of which we had no conception and were in entire ignorance of. Further V. Behring believed that the infantile infection which had so significant a bearing on the future tuberculous state of the patient, occurred principally by infection through the alimentary tract and not by inhalation. V. Behring did not deny the possibility of an inhalation infection in later life, but had a considerable skepsis concerning the demonstration of this although admitting it in individuals who might have been previously tubercle bacillus free.

Wolff had earlier on basis of clinical observations advanced the view that " the infection with T. B. is surprisingly frequent, one can say general, the infection results in the largest number of cases, as it is shown pathologically and clinically in childhood, and is enough to explain the number of adult cases without a reinfection in later years. It is not necessary to explain the tuberculous clinical entity by an immediately preceding infection," and that probably a long period separates infection from disease. The so-called latent tuberculosis must play a greater rôle in explanation of clinical outbreak than previously.

We may dismiss the question as to which is the most frequent entrance place of the tubercle bacilli in childhood, as it may be considered settled that they get in, by what channel does not make much difference, and we must consider adult clinical tuberculosis upon the basis of a previously existing tuberculous infection in childhood.

The accuracy of this dogma may be tested in various ways. The practicing physician will be inclined to analyze individual cases in this sense.

To the physician such states of first infection for clinical purposes pass unnoticed, and the patient, after his first infection, passes into a state of apparent healing or complete and perfect latency. In this state of healing or complete and perfect latency, there is not the slightest indication of ill health. There is usually no discoverable lesion by ordinary examination, and its easiest proof is the discovery of the patient in a state of altered reaction or allergy to the tubercle proteid by the application of the tuberculin.

When for any reason the patient passes from the state of complete and perfect latency to a state of *active latency*, the actual physical aspects of the lesion are not conceived as being much changed, but the bacillus is conceived as being more active in its growth; that the lesion is not so satisfactorily walled in, and that there is continuously absorbed into the body the toxine of the bacillus and which to a lesser or greater extent interferes with the good health of the patient.

Objectively, the simplest description of this is that of " run down " condition. The term sub-standard state of health is perhaps a little more graceful. There are many such sub-standard persons who never manifest clinically or by physical signs any condition that exceeds the so-called active latent state; who are never entirely well, and yet who are never entirely sick; who are never in a sense incapacitated by the infection; who never suffer (although they have the infection) from the disease, and who find that by a limitation of their physical endeavors manifest what is to them satisfactory health because they have never known better.

It is not referred to here of the type of sub-standard case who takes treatment and who, for the first time in his life attains his theoretical normal in every respect, but of the sub-standard case or of the so-called active latent case in which the diagnosis can be classed as doubtful. Therefore we have to consider the individual who is decidedly not tuberculous; who may have the infection, as proved by his allergic state, but who is perfectly well, the sub-standard condition in which the patient certainly has the infection, but in which there is no sign of active lesion, but in whom a perfectly normal state of health does not exist or perhaps has never been known.

The possibility of the extraordinarily long latency of the tuberculous virous in experimental animals has been shown by Romer and Joseph, who have been able by slight infections in such susceptible animals as the guinea pig to delay skin sensitiveness for three months. When it is thought that skin sensitiveness is the first recognizable symptom of a tuberculous infection in human beings, the relative comparison of this known latency in the guinea pig to a possible latency in human beings is not a far stretch of the imagination.

In further support of V. Behring's infection theory tuberculosis is essentially a family or house illness. The unknown or advanced case unwittingly infects all the other members of the dwelling before he is discovered.

If we quote exact post-mortem observations, Beitzke has determined that tuberculosis does not occur more frequently than 60 per cent in the 1,100 he investigated, while Nageles, Burchard and others quote 90 to 100 per cent. The difference in these determinations rests entirely upon thoroughness. Nageles and Burchard made a thorough microscopic search and located tubercle, which procedure Beitzke did not do. If the case has reacted to tuberculin according to Nocard, search until the tubercle is found, and if not found, do not say that it does not exist, but merely that it has not been found.

There can be no objection to the view that in the present state of affairs the occurrence of the infantile infection is the usual one on which a later pulmonary tuberculosis develops, supported through pathological anatomical investigations as well as by biological reactions (Tuberculin). If it is a fact, as Hamberger and others have determined, that the human race is entirely infected by the fourteenth year, then the belief of V. Behring must be correct that tuberculosis develops in a majority of the cases on the basis of an organism that has suffered from the infection in infancy or from an early infection.

It is now necessary to say to what degree this infantile infection is to be made answerable for the development of phthisis in the adult. V. Behring's belief in this is that he considered the altered general disposition of the organism favorable for *the* development of tuberculosis. This so much discussed "disposition" to tuberculosis, a conception, according to V. Behring, which can only be considered in a biological sense, where one defines it as a special arrangement of the body parts and powers in individuals who, under given conditions, not only can develop but must inevitably develop tuberculosis, or the converse.

If the conditions for the development of a true tuberculosis are studied in the animal experiment, we must see that the usual procedure of our work does not lead to a true phthisis in the usual acceptation of the term, but rather the development of one or another type of disseminated miliary tuberculosis. These same types occur in human beings, although infrequently as compared with usual tuberculosis, but when they do occur, why not from the same reasons.

The chronic coursing phthisis clinically seen, however, has been produced many times by many observers—a picture with localizing tuberculosis and cavity formation such as is seen in human beings. Troje and Tauge, Baumgarten, V. Behring, Romer.

Romer has had the opportunity to see repeatedly the development of a true cavernous tuberculosis developing with extraordinary regularity in such animals who already had a slow chronic coursing infection, who were artifically reinfected with a massive second infection, with evidence that the cavity formation follows with the second infection in animals who show at the same time distinct signs of immunity against the second infection. Romer is careful to state that best results are obtained if a long period elapses before second infection (1-1½ years). He also notes cavity formation in slow infection without a second infection, and that cavity formation could occur with only one infection.

He states that such cavity formation does occur, but only occasionally; that the regularity with which it occurs with the second infection leaves no doubt as to the causal relation between the two infections. Cavity formation occurs with such regularity that Romer speaks of it as a law: Experimental cavernous lung tuberculosis develops in the guinea pig with especial ease upon the basis of a chronic tuberculous infection, as the result of a massive second infection. The relation is entirely that of size and virulence between first and second infecting dose as to the development of cavity formation or slow coursing chronic tuberculosis.

On the foundation of this experimental work of Romer, it is possible to make an analysis of the origin of tuberculosis in human beings. The citation of the above pathological, anatomical evidence proves that the greatest percentage of cases must develop upon the foundation of an already very long latent or a larval coursing tuberculous infection. We have seen that such a chronic coursing tuberculous infection can occur in experimental animals that are most susceptible to the tuberculous infection, and that there is developed through this slow coursing infection a very decided immunity against the disease. The relation in human beings must be similar to that in animals for a true tuberculosis in human being is an expression of a reaction of the organism already suffering for a long time from the tuberculous infection against a new infection with tubercle bacilli. It is to be decided whether upon the basis of an already existing chronic tuberculous infection the actual developed clinical cases occur more frequently as the result of an additional infection from the outside or as the result of a metastatic auto infection.

It is v. Behring's idea that the tissue disturbance in tuberculous persons is the expression of an infection of bacilli implanted at a very early age. The tissue disturbance in late infections may in individual cases be referred to inhaled bacilli. They may, however, also extend out from tuberculous nodes already present, and also in a sense be considered as auto infections or metastases. In general it is probable that in human beings the additional infections are so slight that a once tuberculous individual can have his infantile infection for the protection or a relative immunity against further additional infection. It is hazardous to assume that such additional infections do not occur in adults;

that though the first heavy tuberculous infection the clinical outbreak is that of acute miliary tuberculosis in the unprotected; that it is, however, a gradual slow coursing tuberculosis in the protected or exhibiting tendencies to heal. It is probable that the largest number of cases of tuberculosis owe their clinical origin to metastatic auto infections. The basis of the appearance of the heavier auto infection that present themselves clinically as a phthisis in spite of an already existing relative immunity against a new infection lies in close relation to the quantity and quality of the first infection to the quantity and quality of the second infection, or to the factors that may suspend for the moment the tuberculous immunity and bring about a state of lessened resistance or anergy.

Whenever clinically a cause enters in that may drop the patient's resistance or place him in the anergic state, the patient may manifest an exacerbation, a relapse, a clinical outbreak, an extension, with the appearance depending upon the dose of a slow going phthisis tending toward a recovery; of an acute pneumonic phthisis or a destructive cavernous tuberculosis, or without protection, to the development of acute miliary tuberculosis.

The practical conclusion of this work places the emphasis as to whether or not the individual will develop later phthisis upon the quality and quantity of his first infection. The fundamental thought in prophylaxis must be directed to the child that it may not suffer from the results of heavy mass infections. The essential point of this is in the family and in the dwelling. The second point is against factors that may cause the origin of heavy auto infections in persons already tuberculous, to prevent the anergic state. These words are familiar as the avoidance of stress of life, secondary infection with certain diseases well known to bring about an anergic state, and the bad hygiene that favors their development.

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SOME REMOTE EFFECTS OF BAD FEEDING.

Read at the Annual Meeting of the Medical Society of the State of New York, held at Buffalo, April 27, 28, and 29, 1915.

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It is at the risk of being considered a faddist that I present before this Section a paper which might be looked upon as an attempt to attribute all the ills of childhood to bad dietetic management.

More and more importance is constantly being attached to the part played by the gastro-intestinal tract in the production of ill-health. Delicacy, lack of vigor, poor bodily development, wasting and muscular weakness and incoordination, may all be definitely attributed to lack of nourishment due to inability to digest and assimilate, and to imperfect metabolism.

Most of the functional nervous disorders of childhood are now believed to be dependent upon gastro-intestinal toxaemia. Educators are realizing that naughtiness at school is indicative of disturbed health. The influence of auto-intoxication in the production of certain vascular and functional disturbances of the eye is now a practical certainty.

It need not then be considered "Therapeutic Nihilism" to criticize the methods of the many who even to-day treat functional nervous derangements with bromides, anaemia with iron, and general asthenia with tonics, and absolutely disregard the cause of these conditions which are generally conceded to be due to the mal-assimilation and toxaemia of gastro-intestinal disorders.

These are the conditions which, together with what might be considered more specific effects of individual excesses upon individual tissues, may be discussed as remote effects of bad feeding.

By bad feeding we mean irregular feeding, too frequent feeding, between meals feeding, and the allowance of markedly indigestible and badly prepared foods, and excesses in one or more particular elements of the food, all practiced over a considerable period of time.

All of these dietetic errors may be operable from early infancy, although probably as often originating after the first year, and this study of feeding histories has for its object the determining of the importance of early errors and excesses upon the future health of the child.

It has been my practice to include in my case records of older children, in addition to a later dietetic history, a history of feeding in early infancy. These records include the length of time nursed, whether the feeding has been regular or irregular, and as complete as possible, a history of artificial feeding when this has been employed.

The history of irregularity of nursing or feeding and the history of artificial feeding, especially when many changes have been made, have necessarily been no doubt inaccurate in a majority of cases, and, therefore, of little value in making deductions.

The effect of prolonged nursing upon the later health has always been accepted. Of 200 consecutive cases taken from my case notes, and all, of course, sick children, 77, or 38½ per cent, had been nursed for one year or longer. Of these 77 prolonged nursers, 66 showed chronic digestive symptoms, and at least 40 gave evidence of toxaemia, including perverted disposition, disturbances of sleep and functional nervous disorders, including chorea.

In a paper read last year before this Section, in which I endeavored to show some connection between the growth and recurrence of adenoids and a bad dietetic history, it was suggested that nursing errors had some bearing, and too prolonged nursing was mentioned as a factor. A recent study of my records has shown that 60 cases in which adenoids were noted showed 24, or 40 per cent, to be prolonged nursers. Of 55 cases of urinary incontinence, 17, or about 31 per cent, had been nursed one year or over. Adenoids and enuresis are commonly associated.

The ill-effect of prolonged nursing probably depends upon two factors: carbo-hydrate excess, from the high carbo-hydrate content of the breast milk, and irregularity of feeding and overfeeding, with consequent digestive derangement, since prolonged nursing practically always means nursing in addition to other feeding, and much of the nursing is practiced at night when the digestive organs are entitled to rest.

Of 100 consecutive cases studied it was only possible to obtain a satisfactory history as to regularity or frequency of the feeding in 54, and of these, 37 were irregular or too frequent, 16 apparently fed regularly and at suitable intervals. The proportion then of the badly fed to the properly fed was two to one among the sick children examined.

More than 50 per cent of the cases studied admitted gross dietetic errors in later childhood. The apparent effects of these errors will be discussed in three groups; those that seem to depend upon proteid excess, those apparently due to fat excess, and those which may be fairly attributed to carbo-hydrate excesses and which appear to be far more common in childhood. In this last group will be considered the irregular and between meals feeders since irregular feeding is practically synonymous with between meals eating, and eating between meals almost invariably means carbo-hydrate excess, since the articles usually eaten are sweets and starches, candy, bread and cakes.

As far as could be learned from the histories, proteid excesses were rare. Only two cases could be considered excessive meat eaters, only two were apparently consuming excessive quantities of milk. Recently, when prescribing beef juice to a child of two years, an objection was made by the mother that animals who live upon a meat diet are ugly and irritable. An excessive meat diet may unquestionably render a child ugly and irritable through intestinal putrefaction, but excesses in any direction may give practically the same result. Children, however, with great excess of indican in the urine appear to be more ferocious as a class.

Although the dietetic histories of only 50 cases showing marked reactions for indican in the urine were studied, it seemed safe to conclude that the presence of large amounts of indican were not indicative of any specific dietetic excess, but rather of a general digestive disturbance. Though indican must originate in decomposition of proteid matter, the conditions seem to be proteid intolerance brought about by the digestive catarrh rather than proteid excess. The symptoms in the indican cases were little different from those showing very little or no reaction.

Functional nervous disorders, especially noted in the disposition and sleep, were the same in both. Night terrors and sleep walking, as well as mental dullness, occurred with no indican.

Certain skin lesions appear to be commonly associated with indicanuria, and therefore may possibly be dependent upon the toxaemia of proteid decomposition. Urticaria may be mentioned in this connection. Eczema seems to be more commonly noted with carbo-hydrate and fat histories. A small number of choreas in which the indican test was made showed 50 per cent to give very marked reaction.

Bad results from the ingestion of large quantities of fat are more evident in infancy. In later childhood they are manifested in the conditions now conceded to be due to acididosis, recurrent or cyclic vomiting, recurrent bronchitis and asthma, and the effects of the excess directly upon the digestive tract with consequent disturbance of digestion and assimilation.

It is with carbo-hydrate excesses that we have to deal principally in children. What is conceded to be the normal diet between the second and fifth years is to a very large extent carbo-hydrate. Sugars are craved by practically all children, starchy foods are palatable and made more so by the addition of sugar, and continual efforts on the part of the manufacturers of prepared cereals, crackers, and the like to make them more palatable, increase the temptation to over consumption. Again these articles are easily obtained, cheap and easily prepared. Prolonged nursing probably exerts its bad influence to a great extent through carbo-hydrate excess. The artificially fed infant is probably, in nine cases out of ten, over-fed with sugars or starches, and from this period on the error continues.

The almost universal mortality of diabetes in the young appears to depend to a large extent upon our inability to control the dietetic management. Children demand just those elements of food which act adversely upon the diabetic, and few parents have the strength of character to deny them. Even though parents live up to the regime, neighbors, and friends almost invariably interfere. In a case now under my care, a boy between six and seven years old, seen first in a state of coma, the urine has been free from sugar for more than a month. On November 28th the child weighed 40 pounds, on April 10th the weight had reached 44½ pounds with slightly lighter clothes.

His general condition was apparently perfect. This so far good result, I attribute to the fact that the ability to control is exceptional, the patient refusing anything offered of which he is in the least suspicious.

Although, as apparently proven by the animal experimentation of Allen, it is impossible to produce diabetes in the normal subject because of the inability to give sweet or starch food without digestive upset, in the predisposed human being, however, pancreatic weakness may disturb the normal relation, and the digestive processes may be able to take care of more carbohydrate than can the pancreas. Perfect control of diet is therefore absolutely essential to success in treatment. Dietetic control seems to stand in direct relation to the age of the patient, the younger the patient the more difficult the control. This is especially true of carbo-hydrates. It might be suggested that the pancreatic weakness itself is likely contributed to by early errors in diet. The pancreas, like every other organ or tissue in the body, is to a great extent what its nourishment makes it.

The association of a bad dietetic history with the presence of adenoids and large tonsils was very striking. Having studied these cases in their dietetic histories, and having watched the results of dietetic treatment without operation, and as an after treatment in operated cases, I am convinced of the part played by the diet in the establishment of a predisposition to enlargement of both adenoid tissue and tonsils. It is not conceivable that all the gastro-intestinal symptoms found associated can be secondary, and the almost invariable history of gross dietetic errors cannot be disregarded.

A large percentage of the cases of adenoids in which feeding histories were studied showed starch and sweet excesses. Of 60 adenoid cases, over 58 per cent gave such a history. The number of tonsil cases was too small from which to fairly draw conclusions, about 50 per cent of them, however, were carbohydrate feeders.

Urinary incontinence was associated frequently with carbohydrate excess. Over 69 per cent (38 out of 55 cases) had been consuming large quantities of sugar and starch. Regulation of the diet, with restriction of starches and sweets, has in the treatment of this condition certainly appeared to give results.

Indican was present in only 13 of the 55 cases of enuresis, which would make it appear that the limiting of meat in the diet of incontinence cases is not usually indicated. Excessive meat ought to manifest itself in indicanuria.

Of 10 cases of enuresis, in which stool examinations were made, eight showed undigested starch.

Whether we consider the symptom due to interference with central control, or to reflex irritation, whether the cause lies in the composition of the urine or an irritable bladder, or whether the supra-renals or the kidney hormone are at fault, intestinal toxaemia or malnutrition might account for all.

Although an attempt has been made to differentiate the results of certain specific errors, such differentiation is practically impossible and we must content ourselves to a great extent with proofs of the effects of bad feeding generally.

It is conceded that the severity of infection depends as much upon the resistance of the individual infected as upon the virulence of the infecting agent, and that poor resistance may be due to bad feeding. The conditions which predispose to various catarrhal conditions of mucus membrane and skin, which have been described as the exudative diathesis, on the one hand, and those which predispose to glandular enlargement, the so-called lymphatic diathesis, on the other, though no doubt to an extent congenital, are also in part undoubtedly due to an inability of the body to utilize necessary elements of the food, and therefore depend thus far upon faulty metabolism. Even the hereditary tendency may cause us to be justly suspicious of the dietetic habits of past generations. Often when criticizing the diet we are met with the reply "our parents raised their children on such food, why should not we?"

The cases of scarlet fever and measles which I have seen terminate fatally appeared to be almost without exception the exceedingly badly fed. In scarlet fever I have been particularly impressed by the apparent effect of past carbo-hydrate excesses upon the glandular tissues about the throat, and the fatal cases have appeared to be due to these glandular complications. Susceptibility to septic sore throat seems to be more common among the badly fed.

In none of the infectious diseases is the influence of diet upon the outcome so evident as in whooping-cough. In all catarrhal diseases this influence is marked, but the tendency to vomiting, and the stomach and bowel disturbances brought about directly by the paroxysms, doubles the effect. Personally I feel satisfied that the advice to feed such patients immediately after the attack of vomiting, in the hope of maintaining better nourishment, is exceedingly bad and aids materially in prolonging the case, and in encouraging distressing and even fatal complications. The value of vaccine therapy depends to a great extent upon the ability to treat these cases without the administration of drugs, usually given in the form of nauseating syrups, at such frequent intervals, and in such large doses as to unquestionably increase the severity of the gastro-intestinal complication and thereby lower resistance to the infection.

Susceptibility to catarrhs of the mucus membranes may be further exemplified by the frequent occurrence of colon bacillus cystitis and vaginitis.

Of the effects, or symptoms due to toxaemia, the most common and generally distressing is the disturbance of the child's nervous equilibrium. Undoubtedly the whole life of the individual as well as the contentment and happiness of the family depends upon the condition of the digestive tract. Improvement in disposition is one of the earliest results of a regulated diet, and if parents realized the value of a carefully regulated feeding in this one particular, the assurance of a peaceful, happy household, they would demand this regulation of the physician.

In conclusion I would suggest that were the dietetic histories of all patients seen by the physician more carefully studied, many a home made unhappy by sickly, irrepressible children would be brightened, the task of many a teacher lightened, many a diagnosis of tuberculosis found to be erroneous, many a belly left unopened, and infectious disease saved a fatal termination, and most of this without the administration of drugs.

Clinical and Pathological Notes

Cow's Milk Intolerance—History of Three Cases in One Family.

By WALTER G. MURPHY, M. D., *Hartford, Conn.*

The histories here presented were prepared for me by the mother of the children. I had occasion to discuss the subject of Cow's Milk Intolerance and asked for an outline of the histories of these three children, and the results of the mother's observation, as herein described, are so complete and comprehensive that I transmit them just as written.

IN GENERAL.

In reviewing our experiences it seems strikingly evident that our three children are all afflicted with the idiosyncrasy known as milk intolerance. In the case of the two older ones, this was not at first definitely recognized and they were fed on cow's milk from the early days, and the results were bad forms of indigestion, malnutrition, great muscular weakness and other attendant ills. The third child received quite different treatment, no cow's milk was given, the nursing was forced and prolonged, the breast milk was supplemented by whey and the results have been strikingly satisfactory. The child is normal in every way.

IN DETAIL.

First Child—Born February 28, 1910.

This child was uncomfortable from birth because of poor and insufficient breast milk. Some cow's milk was added within two weeks. As long as any nursing was done, the child was in no great misery and at times fairly comfortable, though there was no gain in weight, but as soon as the nursing was abandoned entirely, very aggravated symptoms appeared,—constant and severe distresses both gastric and intestinal, continual vomiting, curds in the movements, etc. This state of affairs gradually grew worse as various expedients were tried until the child was in a very precarious condition. At the age of four and one-half months he was taken to a specialist who by careful, painstaking preparation of the milk, and close watching of the child, relieved the discomfort in great part, though relapses were frequent and there was almost no gain in weight until other food was added to the diet. This was done at first at the age of nine months in the form of cereal jelly added to the bottle. The gain in weight began at once and continued steadily and sometimes at a rapid rate. The discomfort did not entirely disappear and with the coming of the hot weather after the child was one year old there was an attack of fever and intestinal trouble. The milk was thereafter greatly diluted but the fever showed a tendency to return and the intestinal fermentation continued. In the fall, at about eighteen months of age, the milk was taken away entirely, and there was great improvement in comfort and general condition. During the winter repeated colds and attacks of bronchitis broke down his slight resistance and in the spring there was a relapse and the old indigestion and distress returned. Just here he was unfortunate enough to contract a bad case of measles followed among other things by an attack of acute diarrhea, the development of scurvy with its dreadful nervous and muscular suffering and the resultant injury to the nervous and muscular systems. This scurvy developed while the diet was directed by a specialist and contained all the necessary elements, which however could not be properly assimilated by the child. The attack occurred when the child was about two and one-half years old. The intestinal fermentation continued through the third year and the child's resistance was so weakened that colds, and attacks of grip and bronchitis were numerous. At about three years of age he began the use of lactic acid and since then there has been gradual and satisfying improvement in the intestinal weakness. The muscular condition has been the slowest to improve. During the winter of his third and also of his fourth year there were periods of months when he could not walk at all and most of that time he could not even stand on his feet. This condition was preceded by the winter of his fourth year with a slight attack of rheumatism, but in the previous year there seemed no explanation of his reluctance and real inability to walk. In both cases he did not get his strength back till the coming of summer and the return to outdoor life.

It should be stated that the child's progress has been retarded latterly by accidents such as wrenching his leg, which kept him in bed from time to time. This winter he is nearing his fifth year, and while in better health than ever before, is not even now in strong or normal condition. The intestinal trouble, though slight, still remains and his diet has to be carefully watched.

The milk has from time to time been returned to his diet, but always only to be taken away after a few days or weeks. At present he has whey to which at one meal a few teaspoonfuls of milk are added.

The muscular weakness is still very evident and distressing. Though he runs and plays freely around the house, he cannot walk out of doors more than two or three hundred yards without getting tired out.

Second Child—Born December 26, 1911.

The second baby was more fortunate at first as the breast milk was evidently more digestible and did not entirely disappear until the child was two and one-half months old. The gain was continuous, the nutrition excellent, though there was greater or less discomfort most of the time. As soon as cow's milk was the only food, the gain stopped entirely and great distress manifested itself. Inside of two or three months the baby went to pieces altogether with a high fever and intestinal infection and the milk had to be so diluted that great emaciation ensued. After this attack there was no increase in weight until cereal jelly was added to the diet. Then improvement began and as the diet broadened, all unfavorable symptoms passed. This continued until the spring of her second year when there was another intestinal infection and fever from which she did not fully recover. The intestinal fermentation continued and grew worse so that all summer there was a dreadful siege of sleeplessness, loss of appetite, distress and vomiting, great emaciation resulted, and it was impossible to induce any improvement until the milk was taken away entirely. Then the recovery began, but it was very slow as the intestinal trouble was quite stubborn and the lactic acid, which was finally tried, did not have the same immediate effect as in the case of the other child. Finally, in December, she had a slight attack of grip, and on the first day of January developed acute nephritis. From this she recovered rather readily, but the difficulty in feeding was great as she could not take cow's milk; malted milk composed the bulk of her food for a time. She developed the dreadful scurvy, showed symptoms of inflammation of the kidneys, and bad attacks of acute hysteria. She did not leave the sick room from January till April and was then too weak even to creep. Recovery of muscular strength or vitality was very slow. Several attempts were made to introduce milk in some form into her diet, but always with immediate aggravation of the intestinal trouble, curds in the movements with great uneasiness and discomfort, loss of all appetite, etc., so that the effort was finally abandoned and whey substituted. Pronounced progress was not secured until we began outdoor life with both children in the spring following this illness. They were outdoors practically all the time when they were not eating or sleeping, and windows remained wide open in their bedroom at night. They were kept in the sunshine and encouraged to play in sand and dirt. The improvement was very marked indeed. By July she was able to take a few steps, there was considerable gain in weight and vitality, good appetite, better digestion—and now at the beginning of winter she walks independently—though still very stiffly and very weakly. The medicines given were a strychnine tonic, iron oxide and lactic acid.

Third Child—Born March 14, 1913.

The third baby presents a marked contrast. When about three weeks old, as the breast milk became insufficient and some cow's milk was added to his diet, he began to show the unmistakable indications of a similar career. Profiting by the history of the two older children, the nursing was forced and the breast milk continued, while the cow's milk was taken away from his diet altogether and whey substituted. The improvement was marked and immediate. The baby was satisfied and comfortable and the gain was regularly four to six ounces a week. The breast milk was not entirely taken away till the child was a year and a half old. The weaning was accomplished without the slightest disturbance to the child. He now has the regular diet of a child of his age, except that he has never had eggs (neither do the other two children) and only a minimum of cow's milk. Eight teaspoonfuls are added to one feeding per day, but we found we could not go beyond that amount.

His condition is in every way that of the normal, healthy, well-developed child. He is well nourished, has good color, is not nervous, and shows unusual strength and elasticity of the muscles. He walked, though not independently, at nine months. One attack of high fever when cow's milk was added too rapidly to the bottles, has been practically the only illness.

Editorial

"Flebotomy! that is blood-letting: humph! Well, no matter, if 'tis sure to cure me, for I will not lie idle here." The doctor let him know that flebotomy was infallible, especially in this case.

"Hans, go fetch the things needful, and I will entertain the patient meantime with reasons."

The man of art then explained to Gerard that in disease the blood becomes hot and distempered and more or less poisonous; but a portion of this unhealthy liquid removed, Nature is fain to create a purer fluid to fill its place. Bleeding, therefore, being both a cooler and a purifier, was a specific in all diseases, for all diseases were febrile, whatever empirics might say.

"But think not," said he warmly, "that it suffices to bleed; any paltry barber can open a vein (though not all can close it again). The art is to know what vein to empty for what disease. T'other day they brought me one tormented with earache. I let him blood in the right thigh, and away flew his earache. By-the-bye, he has died since then. Another came with the toothache. I bled him behind the ear, and relieved him in a jiffy. He is also since dead as it happens. I bled our bailiff between the thumb and forefinger for rheumatism. Presently he comes to me with a headache and drumming in the ears, and holds out his hand over the basin; but I smiled at his folly, and bled him in the left ankle sore against his will, and made his head as light as a nut."

The Cloister and the Hearth. CHARLES READE.

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The New Curriculum. Plans for the revised course of instruction to be given next year in the Medical College are well under way. Dean Ordway is giving attention during the summer to the arrangement of a systematic course of instruction to cover the four years, so that there will be no reduplication in the various courses. The task is a large one, and a difficult one, but in the end will result in a thoroughly modern curriculum.

The first two years of the medical course are to be devoted mainly to the fundamental sciences, the larger part of the time being spent in practical work in the laboratories. The work of these years is on the so-called "concentration plan," by which the student spends all day for the first half of the first year on gross and microscopic anatomy and embryology, and in the second half of the first year the forenoons are devoted to physiology and the afternoons to biological chemistry. In a similar way pathology and bacteriology are studied in the first half of the second year. In the last half of the second year pharmacology, physical examination of normal infants, children and adults, certain phases of obstetrics and anatomy are taught, and special clinics are given in preparation for the clinical work of the last two years.

In the last two years the various clinical branches are studied in the wards, hospitals, dispensaries and clinical laboratories. The third year is devoted to surgical pathology, clinical pathology and physical diagnosis of both medical and surgical conditions in the dispensaries and hospital wards, and to general dispensary work. Didactic and clinical lectures in medicine are given during the third and fourth years as a basis for correlating and amplifying the information gained in the clinics and at the bedside. In the third and fourth year the special branches of medicine are studied by small groups of students, not exceeding four in number, with a few exceptions, and in the fourth year particular attention is given to bedside instruction. In this part of the course the students under direction and supervision are expected to assume a certain amount of responsibility in the bedside work of surgical and medical cases.

Particular attention is given to the field of public health and a systematic course of instruction in preventive and sanitary medicine is in process of evolution. During the second year, following the course in pathology and bacteriology, students are given laboratory instruction in the examination of water, milk, air and in other matters pertaining to public health. This scheme includes a plan for sanitary surveys, in which groups of students are assigned to certain districts of the city or country, and under proper oversight gain experience in investigation into public health problems. This course in the Albany Medical College is to be perfected by lectures and demonstrations by experts in association with the State and City Departments of Health, and will be amplified by other specially invited lecturers and instructors.

Such is a short sketch of the new curriculum. The details are to be announced later. But it will be plain that the whole system of instruction is to be one which will consider the personal oversight and direction of the individual student.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.
ABSTRACT OF VITAL STATISTICS, MAY, 1915.
COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

Deaths.

Consumption	30
Typhoid fever	2
Scarlet fever	1
Measles	1
Whooping cough	2
Diphtheria and croup	2
Grippe	2
Diarrheal diseases	1
Pneumonia	8
Broncho-pneumonia	5
Bright's disease	11
Apoplexy	11
Cancer	10
Accidents and violence	12
Deaths under one year	15
Deaths over seventy years	31
Total deaths	166
Death rate	17.76
Death rate less non-residents	14.77

Deaths in Institutions.

	Non-Resident.	Resident.
St. Peter's Hospital	0	4
Albany Hospital	10	7
Albany Hospital Camp	6	5
Homeopathic Hospital	3	9
Child's Hospital	0	3
Almshouse	3	0
Central Federation Camp	1	1
St. Vincent's Male Orphan Asylum	1	0

St. Margaret's House	2	0
Maternity Hospital	1	1
Home of the Friendless	0	1
Home for the Aged	0	2
Public places	2	0
Totals	29	33

TUBERCULOSIS.

Bender Laboratory Report on Tuberculosis.

Positive		13
Negative		34
Total		47
Living cases on record May 1, 1915		400
Cases reported:		
By card	30	
Dead cases by certificate	8	
		38
Total		438
Dead cases previously reported	22	
Dead cases not previously reported	8	
Removed	2	
		32
Living cases on record June 1, 1915		406

Total tuberculosis death certificates filed during May		30
Non-resident deaths:		
Albany Hospital	1	
Albany Hospital Camp	7	
C. F. L. Pavilion	1	
		9
Residents deaths		21

Report of Visiting Tuberculosis Nurse.

Old cases	7
New cases	20
Returned from hospitals	17
Total	44

Disposition of cases:

Died	1
Sent to hospitals	14
To general tuberculosis nurse	23
Lost track of	1
Remaining under treatment	5
Total	44
Visits made	42
Visits made, old cases	200
Calls at Board of Health office	26

BUREAU OF CONTAGIOUS DISEASE.

Cases Reported.

Typhoid fever	5
Scarlet fever	26
Diphtheria and croup	7
Chickenpox	30
Measles	26
Whooping-cough	30
Tuberculosis	38
Total	162

Communicable Disease in Relation to Schools.

	Reported D.	Reported S.F
Public School No. 4	....	1
Public School No. 7	....	2
Public School No. 8	....	1
Public School No. 9	1	....
Public School No. 11	....	3
Public School No. 12	....	1
Public School No. 14	....	2
Public School No. 18	1	....
Public School No. 22	....	1
High School	....	1
St. Ann's School	..	1

Number of days quarantine for diphtheria:

Longest...... 14 Shortest...... 8 Average...... 11

Number of days quarantine for scarlet fever:

Longest...... 39 Shortest...... 30 Average...... 31 9/26

Fumigations:

Houses.................. 68 Rooms.................. 373

Cases of diphtheria reported	7
Cases of diphtheria, antitoxin used	5
Deaths after use of antitoxin	2

Bureau of Pathology.

Bender Laboratory Report on Diphtheria.

Initial positive	10
Initial negative	220
Release positive	6
Release negative	47
Total	283

Test of Sputum for Tuberculosis.

Positive	13
Negative	34
Unsatisfactory	2
Total	49

Widal Tests.

Positive	0
Negative	20
Total	20
Milk analyses	59

Bureau of Markets and Milk.

Public market inspections	21
Market inspections	97
Fish market inspections	15
Fish peddler inspections	5
Packing house inspections	1
Rendering plant inspections	3
Slaughter house inspections	5
Hide house inspections	1
Milk depots inspected	12
Milk wagons inspected	38
Milk houses inspected	43
Dairies inspected	35
Milk cans inspected	132
Cows examined	551
Cows quarantined	2
Cows removed	3
Lactometer tests	45
Temperature tests	45
Fat tests	72
Fat tests below standard	8

Bureau of Plumbing, Drainage and Ventilation.

Inspections	268
Old houses	93
New houses	175
Iron drains	98
Connection street sewers	64
Tile drains	66
Cesspools	58
Wash basins	86
Sinks	117
Bath tubs	88
Washtrays	82
Trap hoppers	9
Tank closets	137
Permits issued	154
Plumbing	106
Building	48
Plans submitted	57
Old buildings	16
New buildings	41
Houses tested	55
Blue or red	3
Peppermint	3
Water tests	49
Houses examined	35
Re-examined	95
Valid	25
Without cause	10

Miscellaneous.

Work certificates issued to children	9
Number of complaints of nuisances	94
Privy vaults	3
Closets	1
Plumbing	12
Other miscellaneous complaints	78
Number of dead animals removed	517
Cases assigned to health physicians	75
Calls made	150

Abstract of Vital Statistics, June, 1915.

Compiled by William F. Fullgraff, Registrar.

Deaths.

Consumption	26
Typhoid fever	0
Scarlet fever	0
Measles	0

Whooping cough	1
Diphtheria and croup	1
Grippe	0
Diarrheal diseases	4
Pneumonia	6
Broncho-pneumonia	2
Bright's disease	7
Apoplexy	6
Cancer	9
Accidents and violence	8
Deaths under one year	15
Deaths over seventy years	28
Total deaths	133
Death rate	14.71
Death rate less non-residents	12.28

Deaths in Institutions.	Non Resident.	Resident.
Albany Hospital	5	7
Homeopathic Hospital	4	7
St. Peter's Hospital	4	9
Albany Hospital Camp	7	7
Incurables Hospital	0	1
Penitentiary	1	0
Public places	0	3
Albany County Hospital	0	5
Maternity Hospital	0	5
Totals	21	44

Births	158
Still births	6

TUBERCULOSIS.

Bender Laboratory Report on Tuberculosis.

Living cases on record June 1, 1915		406
Cases reported:		
By card	31	
Dead cases by certificate	12	
		43
Total		449
Dead cases previously reported	14	
Dead cases not previously reported	12	
Removed	2	
		28
Living cases on record July 1, 1915		421

Total tuberculosis death certificates filed during June		26
Non-resident deaths:		
Albany Hospital	1	
Albany Hospital Camp	3	
		4
Resident deaths		22

Report of Visiting Tuberculosis Nurse.

Old cases	5
New cases	39
Returned from hospital	10
Total	54

Disposition of cases:	
Died	17
Sent to hospitals	10
Discharged	0
To general tuberculosis nurse	19
Remaining under treatment	8
Total	54
Visits made	63
Visits made, old cases	310
Calls at Board of Health office	27

Bureau of Communicable Disease.

Cases Reported.

Typhoid fever	3
Scarlet fever	17
Diphtheria and croup	8
Chickenpox	28
Measles	20
Whooping cough	28
Tuberculosis	40
Mumps	7
Puerperal septicaemia	1
Total	152

Communicable Disease in Relation to Schools.

	Reported D.	Reported S.F.
Public School No. 12	....	1
Public School No. 16	....	1
Public School No. 18	1	....
St. Joseph's Academy	....	2

Number of days quarantine for diphtheria:

Longest	14	Shortest	5	Average	10 2/4

Number of days quarantine for scarlet fever:

Longest	42	Shortest	31	Average	34 6/12

Fumigations:

Houses	81	Rooms	458

Cases of diphtheria reported	8
Cases of diphtheria, antitoxin used	8
Deaths after use of antitoxin	1

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria.

Initial positive	1
Initial negative	214
Release positive	0
Release negative	72
Total	287

Test of Sputum for Tuberculosis.

Positive	12
Negative	27
Unsatisfactory	1
Total	40

Widal Tests.

Positive	0
Negative	24
Total	24
Milk analyses	96

BUREAU OF MARKETS AND MILK

Public market inspections	18
Market inspections	80
Fish market inspections	8
Fish peddler inspections	2
Packing house inspections	1
Milk depots inspected	12
Milk wagons inspected	48
Milk cans inspected	155
Milk cans unclean	15
Dairies inspected	82
Cows examined	1,105
Cows quarantined	7
Lactometer readings	45

Temperature tests	45
Fat tests	129
Samples of water analyzed	1
Horses examined	2

BUREAU OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections	254
Old houses	93
New houses	161
Iron drains	98
Connection street sewers	71
Tile drains	71
Urinals	2
Cesspools	56
Wash basins	125
Sinks	123
Bath tubs	99
Washtrays	90
Tank closets	165
Permits issued	142
Plumbing	108
Building	34
Plans submitted	73
Old buildings	18
New buildings	55
Houses tested	59
Blue or red	2
Peppermint	4
Water tests	53
Houses examined	37
Re-examined	65
Valid	24
Without cause	13

MISCELLANEOUS.

Work certificates issued to children	54
Number of complaints of nuisances	75
Privy vaults	3
Closets	5
Plumbing	12
Other miscellaneous complaints	55
Number of dead animals removed	689
Cases assigned to health physicians	78
Calls made	144

Medical News

Edited by Arthur J. Bedell, M. D.

The American Social Hygiene Association.—The American Social Hygiene Association announces that the following committee of judges has been selected to award the prize of one thousand dollars provided by the Metropolitan Life Insurance Company for the best original pamphlet on social hygiene for adolescents between the ages of twelve and sixteen years: Mrs. Martha P. Falconer, Member of the Board of Directors of the American Social Hygiene Association; Superintendent of Sleighton Farms, Darlington, Pennsylvania; Lee K. Frankel, Ph. D., Sixth Vice-President, Metropolitan Life Insurance Company, New York; Luther H. Gulick, M. D., President, The Camp Fire Girls, New York, formerly Director of Physical Training in the New York City Public Schools; Miss Julia C. Lathrop, Chief. Children's Bureau, U. S. Department of Labor, Washington, D. C.; Milton J. Rosenau, M. D., Professor of Preventive Medicine and Hygiene, Harvard Medical School, Boston, Massachusetts; Victor C. Vaughan, M. D., President of the American Medical Association; Dean, Department of Medicine and Surgery, University of Michigan, Ann Arbor, Michigan; Mrs. Ella Flagg Young, Ph. D., Superintendent of Schools, Chicago, Illinois.

The Metropolitan Life Insurance Company desires to use the winning pamphlet among its industrial policyholders.

A few months ago Dr. Lee K. Frankel, Sixth Vice-President of the company, presented the following suggestions which have resulted in this prize offer:

"The educational campaign which has been conducted by the Metropolitan Life Insurance Company for a number of years has proven that it is possible to present the basic facts regarding health and disease and in particular the care and prevention of the latter in such a fashion that even the man on the street will become interested and will follow the instruction which is given to him.

"The question at issue is this: Can the social hygiene program be similarly popularized; can pamphlets or literature of any kind be placed in the hands of the great masses of workingmen and women in the United States written in a popular way and yet not give offense? . . . The opportunity for the Social Hygiene Association is at hand. The association may rest assured that whenever literature can be presented which will meet the requirements mentioned above, which can be distributed in the average American home without danger, and which in a dignified, ethical way will present the fundamental principles which this association advocates, insurance companies generally will be only too glad to co-operate with them and utilize the machinery at their disposal for the distribution of such literature among the millions of men, women and children in the United States, who to-day are policyholders in the life insurance companies."

There has come to be among thinking people who are interested in the progress of human welfare generally a substantial agreement that some form of sex enlightenment must take the place of the old-time "policy of silence." Education, it is recognized, ought to give to every man, woman or child the command and comprehension of such facts as are essential to his welfare; among these are the facts of sex and reproduction. Religion begins to recognize that the decrees of faith and of conscience are strengthened, not weakened, in the realm of sexual morality by knowledge of the facts of nature and science. Medicine, concerned with the health problems of venereal diseases, finds its ally in popular knowledge of their causes and consequences, and looks to moral and religious sanctions to add force to knowledge. So sex instruction becomes the servant of the great forces which seek the advance of humanity from generation to generation.

The questions most likely to be asked by those interested in the competition are: "What kind of pamphlet is wanted? Is it to be written for boys, or for girls, or for both—or for parents? Must it cover the entire period of the four years specified? Must it take up the physiological changes of adolescence? What sort of instruction may the author assume that the child has had before reading the pamphlet?" To such inquiries the reply is that the prize has been offered for the best solution of the problem of approaching through the printed word the youth of America from twelve to sixteen years of age. If the author is convinced that the indirect approach through the parent is the proper method, he may prepare his manuscript for use by the parent. If he thinks that the most pressing need is for a pamphlet to be placed in the hands of boys, he may prepare his manuscript for that purpose. Similarly, he may prepare it for the use of girls, or, if he thinks it more desirable, he may combine his information into a single pamphlet for the use of both boys and girls.

"ARTICLES OF FAITH" CONCERNING CANCER.*—Dr. William Seaman Bainbridge has published the following "Platform Upon Which to Unite in the Campaign of Education."

(1) That the hereditary and congenital acquirement of cancer are subjects which require much more study before any definite conclusions can be formed concerning them, and that, in the light of our present knowledge, they hold no special element of alarm.

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* During the four-day Cancer Educational Campaign, held under the auspices of the Vermont State Medical Society, June 8-11, 1915, Dr. William Seaman Bainbridge, of New York City, presented the accompanying twenty-one "Articles of Faith" at several sessions. They form the conclusion of a paper entitled "The Cancer Patient's Dilemma. A Plea for the Standardization of What the Public Should be Taught in the Campaign of Education Concerning Cancer," which Dr. Bainbridge read at one of the sessions, and which appears in full in the Cancer Number of the *New York Medical Journal*, July 3, 1915.

(2) That the contagiousness or infectiousness of cancer is far from proved, the evidence to support this theory being so incomplete and inconclusive that the public need have no concern regarding it.

(3) That the communication of cancer from man to man is so rare, if it really occurs at all, that it may be practically disregarded.

(4) That those members of the public in charge of or in contact with sufferers from cancer with external manifestations, or discharges of any kind, need at most take the same precautionary measures as would be adopted in the care of any ulcer or open septic wound.

(5) That in the care of patients with cancer there is much less danger to the attendant from any possible acquirement of cancer than there is of septic infection, or blood poisoning from pus organisms.

(6) That in cancer, as in all other disease, attention to diet, exercise and proper hygienic surroundings is of distinct value.

(7) That, notwithstanding the possibility of underlying general factors, cancer may, for all practical purposes, be at present regarded as local in its beginning.

(8) That, when accessible, it may, in its incipiency, be removed so perfectly by radical operation that the chances are overwhelmingly in favor of its non-recurrence.

(9) That, when once it has advanced beyond the stage of cure, suffering in many cases may be palliated and life prolonged by surgical and other means.

(10) That while other methods of treatment may, in some cases, offer hope for the cancer victim, the evidence is conclusive that surgery, for operable cases, affords the surest present means of cure.

(11) That among the many advances in and additions to cancer treatment, the improvements in and extensions of surgical procedure surpass those in any other line, and fully maintain the preëminent position of surgical palliation and cure.

(12) That there is strong reason to believe that the individual risk of cancer can be diminished by the eradication, where such exist, of certain conditions which have come to be regarded as predisposing factors in its production.

(13) That some occupations, notably working in pitch, tar, paraffin, analin or soot, and with X-rays, if not safeguarded, are conducive to the production of cancer, presumably on account of the chronic irritation or inflammation caused.

(14) That prominent among these predisposing factors, for which one should be on guard, are: general lowered nutrition; chronic irritation and inflammation; repeated acute trauma; cicatricial tissue, such as lupus and other scars, and burns; benign tumors—warts, moles, nevi (birth-marks), etc.; also that changes occurring in the character of such tumors and tissues, as well as the occurrence of any abnormal discharge from any part of body, especially if blood-stained, are to be regarded as suspicious.

(15) That while there is some evidence that cancer is increasing, such evidence does not justify any present alarm.

(16) That suggestions which are put forward from time to time regarding eugenic, dietetic and other means of limiting cancer, should not be accepted by the public until definitely endorsed by the consensus of expert opinion. Such consensus does not exist to-day.

(17) That so far as we know there is nothing in the origin of cancer that calls for a feeling of shame or the necessity of concealment.

(18) That it will be promotive of good results if members of the public who are anxious about their health and those who wish to preserve it will, on the one hand, avoid assuming themselves to be sufferers from one or another dreadful disease, but, on the other hand, will submit themselves periodically to the family physician for a general overhauling.

(19) That at all times and under all conditions there is much to be hoped for and nothing to be feared from living a normal and moderate life.

(20) That the finding of any abnormal condition about the body should be taken as an indication for competent professional and not personal attention.

(21) That watchwords for the public until "the day dawns" and the cancer problem is solved, are:—Alertness without apprehension, hope without neglect, early and efficient examination where there is doubt, early and efficient treatment when the doubt has been determined.

Health Officers Must Qualify.—Local health officers appointed after November 1, 1916, must be specially qualified for their work, under regulations adopted by the State Public Health Council. This affects nearly 1,200 positions throughout the State. The Council believes that public health work has many features distinct from the practice of medicine and that it requires scientific preparation not usually obtained in medical school courses. The prevention of epidemics, through education of the public in health matters, and organization of lay interest in public health work together with special training in laboratory methods, are among the most important requirements of modern public health work, in the opinion of the Council and have been incorporated in the new qualifications.

Realizing it is difficult for physicians to secure the necessary training by resident attendance at a school for health officers, the Council provides that it may be obtained through an approved correspondence course, with only one week of resident work in practical demonstrations in laboratory and field work.

In response to a general invitation to health officers and others interested to appear and express their opinions of the tentative qualifications which were sent to all health officers and boards of health, nine health officers appeared. No serious adverse criticism was advanced. With a few minor changes in the original draft, the qualifications were adopted as follows:

Resolved, That local health officers appointed after November 1, 1916, shall have the following qualifications:

I. They shall be graduates of medicine of not less than three years' standing;

II. They shall when appointed be not less than twenty-four nor more than sixty-five years of age;

III. They shall have complied with one of the following requirements:

(a) They shall have taken a correspondence course in public health of one year with at least one week of practical demonstrations in laboratory and field work, both correspondence course and demonstrations to be approved by the Public Health Council, with examinations and a certificate;

Or (b) They shall have taken a course in public health of at least six weeks including practical laboratory and field work with lectures and reading at an educational institution, such course to be approved by the Public Health Council, with examinations and a certificate;

Or (c) They shall have submitted evidence satisfactory to the Public Health Council of special training or practical experience in public health work, with examination if required by the Council;

Provided, however, that under special conditions specified in writing by the local board of health or other appointing power or by the health officer, any of these qualifications may be waived by the Public Health Council.

The Council passed a supplementary resolution recommending to boards of health that in appointing health officers previous to November 1, 1916, they specify that the appointee agree to conform to the requirements within the first year of the new term.

PERSONAL.—Dr. GEORGE VAN VORIS WARNER (A. M. C. '02), has removed his office from Fair Haven to 76 East Front street, Red Bank, N. J.

—Dr. WARDNER D. AYER (A. M. C. '10), for several years an assistant in the Bender Hygienic Laboratory, has left Albany to engage in practice in Syracuse with offices at 1123 East Genesee street. Dr. Ayer is to be in charge of the Department of Histology and Embryology in the Medical Department of Syracuse University, and has received appointments to the Hospital of the Good Shepherd and the Syracuse Free Dispensary.

MARRIED.—Dr. WALTER CLAYTON FOX (A. M. C. '11), and Miss Lillian Van Wagner were married at the home of Miss Wagner's parents at Hyde Park, N. Y., June 29, 1915. Dr. and Mrs. Fox will reside at Fort Plain, N. Y.

DIED.—Dr. EDWARD ANNON CARPENTER (A. M. C. '69), died at the Cambridge Home for Aged People, Cambridge, Mass., June 24, 1915, aged 68.

—Dr. CLINTON BRADFORD HERRICK (A. M. C. '80), died at his winter home in Sharpes, Fla., March 23, 1915, aged 55.

In Memoriam

Edward A. Carpenter, M. D.

Dr. Edward Annon Carpenter, an alumnus of the Albany Medical College of the class of 1869, died at the Cambridge Home for Aged People, Cambridge, Mass., June 24, 1915, aged 68 years.

After taking two courses of lectures in the Albany Medical College and graduating Dr. Carpenter practiced for eleven years in Plattsburgh, N. Y., and then removed to Cambridge, Mass., where he remained until the time of his death. He regarded his work as successful, although he did not strive for any special honors and continued in active work until the debility of advanced life overtook him.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

International Clinics. A Quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, and other topics of interest to students and practitioners by leading members of the medical profession throughout the world. Edited by Henry W. Cattell, M. D., Philadelphia. Published by J. B. Lippincott Co., Philadelphia. Vol. IV. 24 Series 1914. Price $2.00.

This volume contains a great deal of valuable information, among the especially interesting articles might be mentioned *Abderhalden's Biological Diagnosis of Pregnancy* by Philip F. Williams. A resumé of the theory and practice of this test. The author concludes by stating "at the present time a final verdict as to the practical value of the test must be held in abeyance."

Painless Childbirth or Semi-narcosis in Obstetrics by Danl. Longaker. The writer expresses his ideas as to the need of some painless method of childbirth and then proceeds to explain his technic, causes of failure and the dangers, especially to the infant incident to the use of morphine-scopolamine.

A Visit to the Mayo Clinic in Rochester, Minnesota by P. G. Skillern, Jr. A most complete illustrated description of the clinic and its surroundings treated under the following headings:

1. First impressions of St. Mary's Hospital and the operations.
2. The Mayo Clinic:
    (A) St. Mary's Hospital—Historical, Descriptive, Technic in Operating Room, Laboratory of Surgical Pathology, Care of Surgical Patients, Operations.
3. Surgeons' Club.

4. Fellowships.
5. Mission of the Mayo Clinic.

The London Clinical Congress of Surgeons by E. Dunbar Newell, Chattanooga, Tenn. An interesting retrospect of the writer's impressions of the great surgical gathering held during the last week of July, 1914, in the capital of the British Empire. Sir Arbuthnott Lane's clinic was the centre of attraction, exemplifying his two great specialties, i. e., bone-plating and total removal of the large intestine (colostectomy). A master surgeon but unfortunately his theories carrying him beyond the bounds of reason when he talks.

The writer's tribute to the generous hospitality of the London surgeons was well merited.

The volume contains many beautiful illustrations which enhance its value. H. D. C.

The Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. February, 1915. Published bi-monthly by W. B. Saunders Company, Philadelphia and London.

The final numbers of volume three and the early numbers of volume four contain the presentation of cases and the discussion of important surgical topics in the same general manner as has been carried out in the earlier volumes. The clinics have now come to be a well recognized feature of current surgical literature and are of decided value to the student and the surgeon. Distinguished guests at the clinics are frequently invited to discuss topics in which they are especially interested and these discussions are included in the subject matter of the fasiculi. Numerous illustrations form an important feature and add much to the elucidation of the subject matter, and it may be said that the clinics are maintaining the standard set when the publication was started a few years ago. A. W. E.

Surgery of the Blood Vessels. By J. Shelton Horsley, M. D., F. A. C. S. Illustrated. St. Louis, C. V. Mosby Company, 1915.

During the past few years a great deal of interest has been aroused in blood vessel surgery and a large amount of experimental and clinical literature has accumulated. In this volume the author has collected many of the essential facts and problems connected with this department of surgery and has supplemented these facts to a great extent by his own personal experience. The volume is subdivided into sixteen chapters. The first chapters deal with the structure and histologic repair of blood vessels, the indications for blood vessel suturing, the history of blood vessel surgery and the technique of suturing blood vessels, including lateral anostomosis and reversal of circulation.

Transfusion of blood receives especial and detailed attention and all of the methods of any importance are discussed and described. The remaining chapters of the volume are devoted to the treatment of conditions in which blood vessel surgery may be employed, such as hemorrhage, thrombosis and embolism, aneurisms, tumors of the blood vessels, varicose veins, variococele and hemorrhoids. The volume comprises three hundred and four pages of subject matter and eighty-nine excellent illustrations, which add much to its attractiveness and usefulness. To anyone interested in a clear and comprehensive presentation of the subject of vascular surgery brought quite up to date, this work will especially appeal, and to the surgeon it will be of decided scientific and practical value. A. W. E.

Diagnostic Therapeutic Technic. By ALBERT S. MORROW, A. B., M. D. With 860 illustrations, mostly original. Second edition, thoroughly revised. Philadelphia and London. W. B. Saunders Company, 1915.

That a second edition of this work has been made necessary in a comparatively short time is the best proof of its general usefulness and popularity. All the advances and improvements in the technique of diagnosis and therapeusis have been included in the new edition, which brings this subject quite up to date. The arrangement of the volume is, roughly speaking, into two parts: first, a description of general diagnostic and therapeutic methods and, second, a description of the measures employed in the diagnosis and treatment of diseases affecting special regions and organs of the body. Especial attention is given to the subject of anesthetics, general and local. Sphygmomanometry, Transfusion of Blood, Infusion of Salt Solution with all the various methods of hypodermatic injections are discussed and described. Methods of collection and preservation of pathological material are presented, together with the methods of exploratory puncture and aspiration of the various regions and organs of the body. All of the above comprises the first or general part of the work.

The second or special part is made up of detailed descriptions of the methods of examination and therapeutic treatment of all the special organs of the body, both male and female. Operative methods of treatment have not been described except minor procedures, or those required in an emergency, such as tracheotomy, urinary retention, etc. The volume is rather unique in its subject matter and is most practical in every particular. It makes no claim to the presentation of original methods or treatment, but aims to give to practitioners a clear, concise description of the best methods to be employed and the simplest manner in which to employ them. That this is a large subject is evidenced by the fact that the volume contains 834 pages of subject matter. A special feature which adds much to the practical utility of the volume are the numerous and satisfactory illustrations of which there are 860. Of its usefulness to every practising physician, there can be no question, and it will doubtless receive a well merited and wide recognition.

A. W. E.

Anoci-Association. By George W. Crile, M. D., and William E. Lower, M. D. Edited by Amy F. Rowland. Philadelphia and London, W. B. Saunders Company, 1914.

For many years the author has interested himself especially in a study of the physiology and pathology of shock upon which he has written many articles and monographs. In this his latest work, he presents in theoretical and practical detail the essential features of anoci-association. The volume opens with an introductory chapter on the evolution of the kinetic theory of shock and the shockless operation. There then follow several chapters devoted to the kinetic theory of shock and anoci-association. This comprises part one of the volume. Part two deals with the treatment of shock and its prevention through anoci-association. Practically all of this part of the volume deals with the technique of operations upon various organs and regions of the body following out the principles of anoci-association. An appendix presents the technique of administering nitrous oxid-oxygen anaesthesia. The volume contains 259 pages of subject matter with 60 illustrations. The entire subject is presented in Crile's attractive and forceful manner and there is unquestionably much that is of great importance and value. Whether or not the author has gone too far in his assumptions and conclusions, it remains for further study and investigation to show. The especial value of the work lies in the emphasis which it places upon shock as a factor of the greatest importance in all kinds of surgery and the presentation of a practical method of reducing the shock to a minimum. Whether all of the results obtained are due to the method per se or more especially to the wonderful skill of the author in a question which many surgeons have not settled to their own satisfaction. The volume is nevertheless of great scientific as well as practical value to any one who has surgical work to do and represents the last word of one who has spent many years and much energy on the study of shock.

A. W. E.

SURGICAL PATHOLOGY.

Edited by George E. Beilby, M. D.

Surgical Experiences with Pituitary Disorders (The Weir Mitchell Lecture).

Harvey Cushing. *Journal of the American Medical Association, October,* 1914, *Vol. LXIII, No.* 18, *page* 1515.

This paper formed the basis of the eighth Weir Mitchell Lecture before the College of Physicians of Philadelphia, February 25, 1914. As delivered it was fully illustrated by composite lantern slides portraying the varied clinical types of dyspituitarism in the author's series, chief emphasis being laid on the sellar deformations, on the histologic character of the various lesions, and on the perimetric fields before and after the operation. The original lecture was profusely illustrated and many of the illustrations have been reproduced in the present article, which itself has been reduced to largely a statistical consideration of operative results.

The author recalls the fact that much of our knowledge of pituitary disorders has revolved around the question of tumor, using the term in a comprehensive sense. It was the presence of a tumor which first led Marie, and subsequently Frohlich, to couple with this comparatively obscure gland the syndromes which bear their names, and as a usual thing today manifestations of tumor continue to be a necessary guidepost, so that those who venture to predict pituitary disease in their absence do so with misgivings and merely on the ground that similar constitutional symptoms have been known to arise in conjunction with a growth.

Aside from the presence of the tumor, the author states that pituitary disease may bear little relations to the size of the lesion, for outspoken acromegaly may occur with but little enlargement of the gland, and the counterposed secretory state may accompany a primary glandular hypoplasia, so that tumor may not enter into the question at all. Conversely, a surprisingly large tumor producing extreme distortion of the structures of the interpenuncular space may give insignificant and hardly appreciable clinical evidence of its presence.

Cushing particularly calls attention to the fact that endosecretory expressions of pituitary disease are rendered increasingly complicated as soon as we attempt to differentiate between the symptoms produced by two lobes of the gland, for they have very different physiologic activities. It is possible that there may be an overaction or underaction of one lobe alone, or an overaction of one lobe associated with insufficiency of the other; and as in the case of the adrenal cortex versus the medulla, attempts have been made to disengage from the combined picture the symptomatology of a lesion confined to one or the other anatomic division. Furthermore, additional complexity is added by the polyglandular nature of every ductless gland disorder, which in some oasis is so apparent as to make it doubtful which of the endosecretory organs is primarily at fault.

The author confesses to the difficulty of satisfactorily classifying all of the examples of hypophysial disease of which he has records, notwithstanding to give some idea of the character of the cases which he is to review from the standpoint of surgical treatment, he divides his cases into two groups, namely, those cases, 101 in number, presenting definite tumor manifestations, and those, 47 in number, without local signs of the disease. These 101 cases may be conveniently subdivided into the 48 cases in which the tumor has apparently arisen from some suprasellar source—usually from a congenital anlage—and the 53 cases in which an actual enlargement (struma) or tumefaction of the gland itself has served to call forth the local symptoms. The 148 cases in all are further classified on the basis of their endosecretory or constitutional symptoms, irrespective of a tumefaction or otherwise of the gland or its environs. First, Endosecretory symptoms on the side of hyperpituitarism. Second, Endosecretory symptoms on the side of hypopituitarism. Third, Endosecretory symptoms of a polyglandular character.

Regarding operative statistics, in the series of 148 patients with evidences of a hypophysial derangement manifestations of tumor were present in 101 cases. In 95 of these cases surgical measures were undertaken. In a number of patients in the earlier series operations were attempted which experience has shown to have been unwise, and possibly these are offset by the number of favorable cases in the series that have refused operation. Hence it may be roughly estimated that about two-thirds of the individuals with outspoken pituitary disease suffer from defects of vision or from pressure discomforts, capable of some measure of surgical relief.

The various types of operation, from the side, from in front, and from below, may be indicated as follows:

	Cases.	*Operations.*	*Fatalities.*
Subtemporal decompressions	33	37	2
Subtemporal explorations	8	8	0
Subfrontal explorations	5	6	1
Transphenoidal decompressions	16	16	3
Transphenoidal extirpations	52	58	4
	114	125	10

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Original Communications

THE FORM OF THE REFLEXES IN CHOREA.*

Read November 21, 1913, before the Boston Society of Psychiatry and Neurology.

BY WALTER B. SWIFT, A. B., S. B., M. D.,

Instructor in Neuropathology, Tufts College Medical School,
In Charge Voice Clinic, Boston State Hospital,
Psychopathic Department.

Since the report of Shaw (1) demonstrating that the knee jerk had special characteristics in chorea, attention has been focused mostly upon that one reflex and its abnormal form in that disease. In this report no mention is made of the other reflexes; so we unconsciously infer that the knee jerk alone is affected. A little reflection and the report of a case will show that there are still further facts to be observed, and also demonstrate the peculiar-wabbling-reflex-form that may show in any other reflex present in chorea. The case follows:

Case: Boy, age 7. American, school grade 2.

Complaint: Trembling left side.

Sent with a diagnosis "Anterior Poliomyelitis with choreic movement" to the neurological department of the Boston City Hospital.

P. I.—Began three weeks ago. Mother first noticed twitching in left hand and leg. No pain, no fever, no paralysis; not in bed at onset. Since onset some worse. Now drops things from his hands. Cannot keep his foot still. Hard to button his clothes. Grasp with his left hand unsteady. Left leg kept stiff in walking and often stops very suddenly. No voice change noted.

P. H.—At 18 months, measles; at 2 years, pertussis.

F. H.—Father, mother, three brothers, one sister well.

P. E.—Gait choreic, i. e., irregular, jerky movements now causing an appearance of spasticity, now of flaccidity; once the toe dragged. Incoordinate, aimless movements of left leg and abdomen and left arm.

Reflexes—wrist and triceps, knee jerks and Achilles normal on the right, while these reflexes on the left are modified by marked choreic movements now lessened, now increased, again complicated by other muscle movements. Abdominals and epigastrics active.

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* From the Neurological Department of the Boston City Hospital, Service of Professor John Jenks Thomas.

No Bab. No atrophy. No cyanosis.

No movements seen on right side. Grip markedly unsteady on the left.

Eyes: Internal strabismus. Pupils react to light and distance. O. M. N.

Throat negative.

Heart: No murmur; no enlargement.

Sensation is normal over whole body to p. and t.

Later, rare and slight choreic movements also seen on the right, in leg and hand. Some in lips and rare head movement. On forehead and chin nickel-sized red areas with fine scaly surface. Upper legs—calves both 24 cc.

The Reflexes more Minutely.

(A) At rest the case shows movements as follows:

Arm, left. All small hand movements, external rotation, internal rotation, flexion, extension of hand, adduction of arm.

Leg, left: Foot shows internal rotation, flexion and extension.

Lower leg shows internal rotation; external rotation; flexion and extension in pretty rapid succession. Also leg adduction.

Abdomen: Contraction of the rectus muscle and other indefinite movements.

(B) During reflex act patient shows movements as follows:

Wrist jerk, triceps, knee jerk and Achilles are all complicated by these movements. At one time they are increased to an appearance of exaggeration; at another time they are lessened in execution of the reflex act; again they are stopped in their otherwise normal movement, or have an outward or an inward rotation added to an otherwise normal reflex act. They are also complicated by other synchronous movements in neighboring muscle groups.

The shoulder may rise, be moved forward and back during the elicitation of the arm reflexes.

From this case and the minute analysis of choreic motions that modify the usual reflex-form, it easily follows that the characteristic choreic knee jerk as well as other reflexes have three distinct qualities. These three qualities consist in contraction that (1) lessens the reflex response, (2) that enhances that response or that (3) adds a motion or action to that usual reflex act. There may also be any combination of all these three. To illustrate: The extension of the lower extremity in eliciting the knee jerk may be accompanied by a choreic extensor contraction. In this case it flies up as if exaggerated. Or again, the extension may be accompanied by a choreic flexor contraction, in which case the extensor response is inhibited and the reflex act may then have the appearance of a diminution. Or again, some other contraction may be synchronous with the reflex act or immediately follow it, and yet neither enhance nor retard it, as interval rotation, foot extension, abduction, or any action. Thus we see three ways the elicitation of a reflex may be changed by a choreic movement; it may enforce, retard or add to that act. If it enforces, we get a jerky reflex. If it retards, we obtain a flop in the reflex act. If a motion is added neither hindering nor enhancing the reflex action we get a twist of the agent executing the reflex. Jerk, flop and twist or wabble then well describe the characteristics of the choreic reflex. It may take several trials to elicit all these points, or numerous observations of a single case before we would feel justified in writing on the records that the reflexes show the jerk-flop-twist form of response. This change may occur at any part of the reflex swing.

One need hardly add that all cases cannot show the characteristic form. The mild choreas may never show it, the movements are too slight to show in action, or too infrequent to occur simultaneously with the usual reflex response. Then again, the pendulum may swing to the severest bedridden forms where motion is so tense and constant that the part in contraction renders reflexes unobtainable.

Shaw (1) held at that time that more observation was needed to determine its exact value. Just how the wabbling choreic reflexes could make one think of anterior poliomyelitis is hard to see, for here the reflexes are absent. The only pitfall I can see is that in a marked case this choreic form might be confounded with exaggerated reflexes. I fail to see any resemblance to absent reflexes. They might occasionally simulate diminished reflexes. But all of these occasional confusions would immediately be cleared away by trying the reflex a number of times,—this showing that simulations of exaggerated and diminished reflexes are inconstant and thus ruled out. This form of reflex in chorea can be of no great value. For where they occur, choreiform movements can also otherwise be seen, and yet in a certain sense it can be considered as an added sign (2) to the series of other signs and symptoms. One could say this peculiar form of the reflex is a sign of chorea. It occurs in no other disease. Therefore it is pathognomonic when present. It is therefore perhaps as valuable as the respiratory signs of Graves (3) or the new voice sign in chorea (2); for surely they all have the same source whence they spring; and only differ in external appearance because passed through different agents of expression. In plain phrase, in respiration the choreic contraction causes spasms in breathing; in voice production, an increased intensity and rise in pitch; and in the reflex, a wabbling motion. The frequency of this choreic reflex sign, and its relation to the degree of severity may be of more value than its mere occurrence. What I mean by frequency (4) is merely how often it occurs as compared with other signs. Frequency is of value especially when high, for then it tends to be pathognomonic and is thus classed among the tests first to be tried. I estimate the frequency as one in five to ten. The relation to the degree or severity of the disease may be of most value as indicative of treatment. I have never seen it in the milder forms, rarely in the medium severe, and most marked severe, and absent again in the extreme bedridden forms. Roughly these same relationships are true of the respiratory signs (3) and of the voice sign (2) and this tallies as well with the appearance and isolated frequency of the plain contractions themselves.

The point of technique of elicitation (5) must necessarily be left for a further study and will probably appear in this journal at a later date.

Perhaps a word should be said about further mention of the reflexes in chorea in the literature. As far as I know Shaw (1) rightly claims that no mention of the choreic knee jerk has been found in the literature. This was in 1897. Sinkler in 1886 wrote (16):

" I have examined the condition of the Patellar Reflex in fifty cases. In twenty-six of these it was present in normal degree; in fifteen it was diminished; and in nine it could not be excited. In one patient it was absent during the height of the choreic movements, but could be readily produced after the patient had recovered."

The condition of the reflexes has also been examined by Joffroy and Saric (*L' Union Médicale,* September twenty-second, 1885), and they found that of sixteen cases of chorea the reflexes were abolished or diminished in twelve.

In 1894 Osler (6) remarked "The condition of the reflexes has not often been studied." In 1895 Sachs (7) in his admirable diagnostic treatise on nervous diseases in children makes no mention of the reflexes. Risien Russel stated in 1899 (8) that "In some cases the resulting contraction of the quadriceps extensor is unduly sustained." Upon this, W. Gordon rightly remarks, "This, I venture to say, is not quite the whole case, and particularly deserves more than a passing note." With this opinion the present writer strongly acquiesces for one reason, because the case presented above was brought to me with a diagnosis of poliomyelitis, and for another reason, because authors differ so widely in their description.

Oddo (9) deserves the credit of making the most exhaustive study of choreic reflexes in the literature (1900). He reports from 147 cases that "the reflexes are modified by choreic movements and are diminished (supprimes) or exaggerated." "The disturbances are not like those of severe motor troubles. They consist of abduction and torsion. They may deceive one about the real condition, which may be discerned by repeated examinations. They are more marked on the side where the chorea is worse. The diminution or exaggeration is not in proportion to the intensity of the lesion. Both can come in the same case, usually increased on one side and diminished on the other." (Pretty exact translation.) He claims the same for the Achilles reflex as for the patellar.

I mention these details because my own observations differ somewhat. He omits an exact and exhaustive description. He states they are distinct from the pyramidal tract lesions but does not state how. I have found the reflex change in proportion to the intensity of the case, except in some of the bedridden cases. I have found no such clinical picture as "increased on one side and diminished on the other," but rather the same on both sides where severity was equal.

W. Gordon says in the "peculiar knee jerk," "the foot remains suspended for a variable time and then slowly sinks back to its initial position." This also is by far not the whole case. Again he says, "The suspension shows the knee jerk itself has evoked an involuntary movement." This I question. The movement if "evoked" is surely involuntary, and I have grave doubts as to whether the knee jerk could have evoked it. If so, one would expect it to accompany the knee jerk uniformly; and also to be found regularly either in the outward or backward swing of the leg during this reflex. As it is neither so found nor uniformly seen, I therefore conclude the simultaneous contraction is merely a coincidence or let loose involuntarily when making an effort to control a motion (during a reflex).

Gordon continues: "In its bearing on diagnosis this reflex merits some consideration," and reports a mild case with a present hung up knee jerk that helped him decide on the diagnosis. These cases are not common. "So this sign is occasionally of value." "Dr. Peacock of Dublin has found its presence a help in diagnosis."

"If, as Bouteille says, 'Tout est extraordinaire dans cette maladie,' it may not perhaps be thought unnecessary to bring forward even the most trifling contribution to its symptomatology."

Eshner (11) states "The knee jerks in chorea are extremely variable in different cases and even in the same case at different times, being sometimes increased and sometimes enfeebled or wholly wanting." He also quotes Gordon. It is also here clear that details of form of the reflex are wanting.

Oppenheim states (12) "Except in the paralytic form the tendon reflexes are normal." Then again we read in Kleist (13), "Tendon reflexes are exaggerated both sides equally with no Babinski." And then we read in Kopczynski (14), "A frequent diminution or absence of reflexes, especially the patellar."

From all this one can best infer a confusion of terms—and a too meagre description of the exact reflex form. The present paper is an effort to make clear these two points.

Nowhere is Shaw (1) given the credit due him as the first, so far as I know, to call attention to the choreic change in the knee jerk. This may be due to the place of its publication—THE ALBANY MEDICAL ANNALS—which at that time must have had a very limited circulation. But as first observer and first recorder Shaw holds first place. I have traced the vague reference made by Osler (6), and no earlier mention than Shaw was found that described the form.

Little is said about the technique for the best elicitation of this reflex form. This subject I prefer to reserve for a later report (15).

Summary: Shaw (1) is confirmed in his observation on a single reflex in chorea—the knee jerk. The present contribution shows a reflex form that may appear during the elicitation of any of the normal reflexes. This form of reflex is really so peculiar as to amount to a sign of chorea of equal dignity with the respiratory signs of Graves (3) and the new voice sign (5) in chorea. The form of the reflex consists in an enhancing, retarding, or otherwise varying of the normal form of the reflex. It may therefore in brief be described as the jerk-flop-wabble form of reflex response. It is any change of reflex motion caused by a choreic contraction.

It occurs most frequently in the medium severe cases; and as a whole probably about once in five cases. In previous literature it was first observed in the knee jerk alone by Shaw (1). My contribution portrays its form in detail; and shows it may be present in all the other normal reflexes.

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THE VALUE OF A STUDY OF THE REFLEXES IN THE DIAGNOSIS OF NERVOUS DISEASES WITH ESPECIAL REFERENCE TO THE ALTERATION AND ABSENCE OF THE UMBILICAL REFLEX IN THE DIAGNOSIS OF TYPHOID FEVER.

Read before the Medical Society of the County of Albany, March 18, 1915.

By HERMON C. GORDINIER, A. M., M. D.,
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It is not my purpose in this paper to enter into a detailed anatomical description of the various reflexes that concern us clinically, or to attempt to enter into a discussion of the disputed points in regard to their neuro-muscular physiology or pathology. For the development of reflex action it is essential to have an intact reflex arc, consisting of an afferent or sensory nerve, with its peripheral termination or sensory end-organ intact and excitable; (2) a nerve cell or group of nerve cells in the central nervous system, the so-called reflex center, together with an intact efferent or motor nerve, with healthy motorial end plates and healthy muscles, either striated or non-striated in character. Given such an intact reflex arc, if a stimulus of proper intensity be applied on the afferent or sensory side of the arc, it will be followed by the occurrence of a muscular movement. The presence of such reflex activity indicates the intactness of the reflex arc concerned. Conversely, if either the afferent or efferent channels or the reflex center be blocked by pathological changes, no such reflex manifestation will occur; or, on the other hand, if the pathological processes be only irritative and not destructive in nature, the reflexes will, from over-stimulation, of necessity be exaggerated. We must remember, however, that in the higher animals and man a further factor often comes into play, namely, cortical inhibition; and we may find that even with an intact arc, a reflex action may not take place; this cerebral inhibition is being constantly exercised, save when the inhibitory centers are diseased. Hence, in order to bring out the presence of reflex activity, it may be necessary to resort to numerous contrivances such as "Jendrassik's re-enforcement" to diminish or temporarily annul this inhibitory influence.

The anatomical construction of the human nervous system is such that it is beautifully adapted for carrying on one of its most important physiologic functions, reflex activity. This is particularly true of the architectural structure of the spinal cord, medulla, pons, mid-brain and basal ganglia. The spinal cord and medulla are so constructed anatomically that apart from being great conducting mediums, they are arranged in a series of reflex centers superimposed one above the other, so that one can by a painstaking study of the condition of the reflexes determine with almost mathematical precision the exact situation or level of an existing pathological lesion. This presupposes, however, on the part of the observing physician a thorough knowledge of the anatomy of the nervous system, as well as its physiology, as being essential to the recognition of the great value which a study of the condition of the reflex mechanisms have in the diagnosis of many pathologic states of the nervous system. Consider how valuable the study of the condition of the afferent and efferent channels or of the reflexes, as well as their centers in the spinal cord, is in the localization of certain root lesions, as well as spinal cord tumors, tuberculosis and other lesions of the spine, abscesses, fracture-dislocations, bullet wounds, sabre injuries, etc. Consider also the great value, from a diagnostic standpoint, of a careful knowledge of the condition of the reflexes in the diagnosis of many of the system complexes or diseases of the spinal cord. It would be impossible in the time at my disposal to more than allude in a most fragmentary manner to some of the more important of these complexes, which are rendered easily diagnosticable by a study of the reflexes. How familiar we all are with the symptoms and pathology of locomotor ataxia, and yet how few of us recognize the disease in its pre-ataxic stage, and how many of us treat these cases for months, yes for years, as cases of rheumatism, neuritis, joint disease, weak feet, Goldthwaite's disease, etc. These errors in diagnosis would never be committed if we would study with care the condition of the reflexes excited by the pathologic changes of this disease. The absence, symmetrically or asymmetrically, of the patella tendon reflexes and the tendo-Achillis jerks, together with the presence of the Argyll-Robertson pupil and hypotonia, is pathognomonic of this disease. I have observed two cases of tabes with preservation of both knee jerks for five years, but with absence during all of this time of the tendo-Achillis jerks. This latter reflex is frequently found absent long before marked changes occur in the patella reflexes. The absence of the light reflexes on one or both sides, if local ocular disease can be excluded, is well nigh pathognomonic of cerebro-spinal lues. I wish further to emphasize the fact that the physician should never dismiss a case with diminution, inequality, or irregularity of the knee jerks without carefully eliminating the possibility of the presence of general paresis, tabes, or cerebro-spinal lues. Absence of the patellar tendon jerks, with preservation of the light reflexes, but with paralysis of the muscles of accommodation and deglutition, with or without weakness and ataxia of the extremities point strongly to diphtheric multiple neuritis.

Loss of the consensual reflex to light indicates either a lesion located in the mid-brain "corpora quadrigemina," interfering with the conduction from one-third nerve nucleus to its fellows of the opposite side, or a block in one or other optic nerve. In the diagnosis of Freidreich's ataxia, a form of combined sclerosis, absence of the patellar tendon reflexes is a sign of great value if combined with the extensor type of the plantar reflexes. Consider for a moment the value that a study of the condition of the reflexes have in determining that a lesion in the central nervous system is functional, or organic; and if organic, is irritating or destroying the cortico-spinal motor neurons or great motor path. These latter conditions are positively indicated when we have instead of normal plantar flexion, plantar extension, the Babinski, Oppenheim or Gordon phenomena, coupled with great exaggeration of the patellar tendon reflexes and tendo-Achillis jerks, with or without ankle or knee clonus. When the above described conditions exist on one side, they indicate focal disease (hemorrhage, softening, tumor, abscess or cyst) of the cortex, or underlying white matter, with monoplegia, diplegia, hemiplegia, or unilateral spastic paralysis; or when bilaterally placed, double cortical or sub-cortical disease, so-called Little's disease, or cerebellar tumor or abscess; or if localized to the lower extremities, primary or secondary spastic spinal paralysis. Conversely, we may have lively or great exaggeration of the reflexes without a true clonus, Oppenheim or Babinski phenomenon in functional nervous diseases, such as hysteria and neurasthenia. In persons suffering from either of these morbid conditions, a slight tap of the tendon frequently excites a jerk not only of the leg but of the whole body, and a spurious ankle-clonus is frequently obtained. This form of clonus, which is often mistaken for a true ankle clonus, can be easily differentiated from the latter by the fact that it is never associated with an extensor plantar reflex "Babinski phenomenon" and is usually poorly sustained and irregular in rhythm, and one may feel the voluntary contraction of the muscles. This irritable condition of the reflexes is due to a hyperexcitability of the nerve cells of the spinal cord, with a temporary diminution, or loss of cortical inhibition. The presence of muscle spasm, increased jaw, patellar tendon, tendo-Achillis jerks, ankle and often knee clonus, with, in addition, the Babinski phenomenon, and local atrophy or wasting of the small muscles of the hands, or about the shoulders, indicate spinal amyotrophy or amyotrophic lateral sclerosis. This same complex, with the addition thereto of loss of temperature and pain sense, is indicative of syringo-myelia or hematomyelia; spondylitis deformans or intra-medullary tumor. The presence of sudden paraylsis, or paresis of many or few muscle groups of random distribution, either unilateral or bilaterally distributed, with early loss of the deep reflexes, rapid muscular wasting, and electrical reactions of degeneration, indicate acute inflammation of the anterior horns of the spinal cord, infantile paralysis or poliomyelitis. Here, as in the following syndrome, the block is in the reflex centers; not, as in neuritis, due to lesions of the centripetal or centrifugal reflex paths. On the other hand, we may have a slowly and stealthily increasing form of muscular atrophy, beginning in the muscles of the hands or about the shoulder girdle of one or other side, with an early diminution and loss of the deep reflexes, indicating a chronic poliomyelitis, or the Aran-Duchenne type of progressive spinal muscular atrophy. In primary amyotrophy, the deep reflexes are usually lost early. This may be due to the peculiar degeneration of the muscles. The loss of the deep and often superficial reflexes, with paresis or paralysis, muscle tenderness, pain, loss of muscle sense, and various paraesthesia, with later double wrist and foot drop and the stocking glove form of anaesthesia, indicates the condition known as infectious multiple neuritis. Alcoholic neuritis, which early affects with predilection the lower extremities, presents an early blocking of the tendo-Achillis and patella tendon jerks, whereas neuritis due to lead affects usually the extensors of the upper extremities, causing abolition of the reflexes only in those members, and leaving the supinator longus uninvolved. In the diagnosis of Sciatic neuritis the absence on the affected side of the tendo-Achillis jerk, the presence of certain painful points and the compensatory scoliosis, is almost pathognomonic; whereas if the tendo-Achillis jerk is present on the side affected, we must make the diagnosis of Sciatic neuritis with a great deal of circumspection. The sudden exaggeration of the patella tendon reflexes in a patient suffering from a wound infected with garden soil or the contents of an explosive, should give warning to the physician of the onset of traumatic tetanus.

The study of the deep reflexes is of much value from a prognostic standpoint in the condition known as diabetes mellitis because of the clinical fact that a very severe and usually fatal form is indicated by a persistent diminution or loss of both patella reflexes. With the usual symptoms of multiple sclerosis, exaggerated reflexes clonus, intention tremor, nystagmus and scanning speech, the absence of the umbilical reflex clinches the diagnosis. In the coma following apoplectiform attacks the umbilical reflex is usually absent on the paralyzed side.

The cervical autonomic or sympathetic chain contain not only true secretory, sweat and vaso-motor nerves, but special reflex-oculo-pupillary fibers, which through their anatomic relation with the cilio-spinal center in the spinal cord and certain centers in the medulla oblongata, supply the dilator pupillae, non-striated fibers of the levator palpebrae, and the muscle of Müller.

This complex reflex mechanism has not received the attention clinically which its study deserves. The cervical sympathetic fibers are often compressed by pathologic processes in the neck or chest, and their centers by similar processes in the spinal cord, or medulla; such as tumor masses, aneurisms, apical infiltrations, central gliomata, or unilateral softening, or reflexly irritated by toxines floating in the blood stream, such as occurs in Graves, Bright's and some cases of cardiac disease.

We know both by abundant clinical and experimental evidence that paralytic lesions blocking the impulses through these centers in the medulla or cervical cord, or through the reflex channels situated in the cervical sympathetic chain, produce on the side of the lesion enopthalmos, narrowing of the palpebral fissure, contracted pupil and unilateral sweating. Whereas irritative lesions cause the opposite effect; namely, widening of the palpebral fissure, dilatation of the pupil and exopthalmos with the associated signs of Moebius, Von Graefe, and Stellwag.

I could, perhaps, with much interest and profit if the time allowed, multiply further these diagnostic indications, which a study of the reflexes would permit, but as a part of the title of my paper is the study of the condition of the abdominal reflexes in typhoid fever, the remaining remarks will be confined to that subject.

In reviewing the extensive literature in regard to the reflexes one is struck with the scant references made to the significance of the abdominal reflex in clinical medicine, its investigation having been chiefly confined to the study of its value in nervous diseases. Some authors go so far as to place no reliance whatsoever on its presence or absence. Oppenheim, for example, says that it is inconstant in health and therefore not of much practical importance. Müller and Seidelman, on the other hand, have proven its constancy by finding it present in all but one of three thousand persons who were free from abdominal or nervous diseases. These writers concluded that when the abdominal reflexes are absent in young persons of either sex, it is probable, if the proper technique has been employed, that there is a pathological cause, which may be either disease of the nervous system or an acute infection of the abdominal organs. Janim drew attention to its loss or impairment on the right side of the abdomen in perityphilitis, gall stone colic, and cholecystitis. In chronic abdominal diseases—such as ascites, tubercular peritonitis and abdominal tumors—active reflexes could often be obtained. J. D. Rolleston, in *Brain*, 1906, page 99, in an article entitled "The Abdominal Reflex in Enteric Fever," first directed the profession's attention to the value of a study of this reflex in the diagnosis and prognosis of typhoid fever. His paper was based on observations made on sixty patients, all of whom were certified on admission to the hospital to be suffering from typhoid fever. In forty-five cases the diagnosis of typhoid fever was confirmed; the other fifteen cases were found to be suffering from other diseases—as for example, pneumonia, two cases; infectious endocarditis, two cases; influenza, two cases; leucocythemia, cirrhosis of the liver, gall stones, appendicitis, sarcoma of the peritoneum, tubercular peritonitis, erythema nodosum, pleurisy—bronchitis of each one case. In the case of suppurative appendicitis it was absent on the right side and disappeared immediately after the evacuation of the pus. It was absent in the case of acute cancerous peritonitis; also in the case of pneumonia in a lady of forty-five years of age, with great laxity of the abdominal walls, the result of twelve pregnancies. It was present in the case of tuberculous peritonitis and of cirrhosis of the liver. In the forty-five cases of typhoid fever the abdominal reflex was affected to a varying degree in forty-two cases—that is, 93 3/10 per cent.; it was completely lost in thirty-one cases, or 68 8/10 per cent.; and greatly impaired in eleven cases, or 22 2/10 per cent. These figures testify, according to Rolleston, that the affection of the abdominal reflex in typhoid fever is a more frequent phenomenon than the loss of the tendon reflexes in diseases associated with peripheral neuritis, and that it therefore has a better claim to rank in the semeiology of enteric fever, than impairment of the knee and ankle jerks has in that of diphtheria. On the other hand, impairment of the abdominal reflex in typhoid fever is of much shorter duration than that of the tendon reflexes in diphtheria, which once lost often take many weeks or months to return.

My interest in regard to the value of the study of the abdominal reflex dates from the appearance of Rolleston's article eight years ago and embraces all the cases of typhoid fever occurring in my service at the Samaritan Hospital during that period.

Oppenheim divides the abdominal reflex into a supra-umbilical and infra-umbilical. The supra-umbilical has often been described as the epigastric and the infra-umbilical as the hypogastric. It is the infra-umbilical reflex that we are concerned with in the study of typhoid fever, as the supra-umbilical, or epigastric, is but little altered, being present in most of the cases studied by me. The center which controls the abdominal reflex is localized in the dorsal cord, probably between the ninth and twelfth dorsal segments.

This paper is based upon the study of one hundred and eleven cases admitted into my service at the Samaritan Hospital and certified to as cases of typhoid fever. Of this number four proved to be cases of la grippe, three of infectious endocarditis, four of pneumonia, one of pericarditis, and one of acute miliary tuberculosis. In only one of the above-mentioned cases was there the slightest alteration of the infra-umbilical reflex. This was a case of massive pneumonia that developed a suppurative peritonitis, the result of a deep-seated ulceration, with perforation of the ascending colon; and not until this perforation complicated the case did this reflex absent itself. The ninety-nine remaining cases were true cases of typhoid fever, and in eighty-six of these cases there was a definite alteration of the infra-umbilical reflex 86 7/10 per cent. Most cases of typhoid fever that entered the hospital came in during the second or third week of the febrile reaction, and hence in sixty of these cases the reflex on admission was absent on both sides. In thirty-nine cases, however, that came in during the onset of the febrile reaction it was noticed that during the beginning of the febrile reaction the reflexes were normal or slightly exaggerated, such as often occurs with the deep reflexes at the onset of multiple neuritis. But at the termination of the first week and the beginning of the second the reflex presented a characteristic alteration—that is, it was diminished first on the right side, then on the left, and in a day or two absented itself in that same manner—first on the right and then on the left side. The reflexes remained absent until the temperature remained normal for several days and when convalescence was well established. Then the reflexes reappeared, usually first on the side lost and then on the opposite side.

Rolleston found that in nineteen cases the infra-umbilical reflex returned after the evening temperature was normal in the same week. In three cases the evening temperature was normal for three weeks before the reflex became active again. In eight cases the temperature was normal in the evening for two weeks before it reappeared, and in five cases the evening temperature remained normal for one week, when it reappeared. In two cases the reflex never became active. If the abdominal reflex is persistently absent after the febrile reaction has ceased, one should anticipate a relapse. In two cases of this type studied by me a definite relapse followed. In eight other cases with relapse where the reflex during the subsidence of the fever had reappeared, again disappeared upon the advent of the fever of relapse. I have never observed the infra-umbilical reflex absent in other febrile affections unless the abdominal cavity or peritoneum were directly affected. In three cases of Para-typhoid fever observed by me, responding at first to both the Alpha and the Beta types of the colon groups, it was absent on both sides until convalescence was complete, about two weeks after the evening temperature had remained normal. I have observed its absence on one side or other in six cases of pelvic peritonitis due to tubal disease, also in three cases of suppurative peritonitis due to perforative appendicitis, in one case of general peritonitis from ruptured gall bladder, in one case of perforation of a duodenal ulcer, and in the above-mentioned case of general suppurative peritonitis following perforation of the ascending colon. In thirteen cases of acute appendicitis without rupture it was absent only on the right side, reappearing again after operation. I have frequently found it present in scarlet fever and measles, and it was also present in fifteen cases of lobar pneumonia in my hospital service last winter. In two cases of Laennec's cirrhosis of the liver with moderate ascites, it was present; and I have found it present in several cases of intra-abdominal tumors. In cases of great abdominal distension, such as occurs in extensive ascites, or in very large cysts or other tumors of that type, I should expect to find it absent. I have found it absent in three cases of multipara with large loose pendulous abdominal walls.

In obtaining this reflex one should irritate with a delicate sense of contact, and not roughly. I commonly used the point of a pen-holder and scratched quite lightly; otherwise what appears to be an alteration of this reflex is quite apt to be artificially induced. From my experience I do not believe that this reflex is absent except on the rarest occasions unless some abdominal or serious peritoneal complication has ensued. I regard the characteristic alterations as above described and the complete absence of this reflex on each side, accompanied with a continuous temperature, as being highly suggestive or diagnostic of typhoid fever, or of the para-typhoid group.

In the cases here studied no constancy existed between the condition of this reflex and that of the deep reflexes. In most cases of adults where both infra-umbilical reflexes were absent, both the patellar tendon and tendo-Achillis jerks were also diminished or absent. In a few cases, however, the deep reflexes were present and lively. It is interesting here to note that the infra-umbilical reflex is not constant or well marked until after the third year, and that it becomes more or less inactive after the fiftieth year. In other words, it is most active during the time of life when typhoid fever is most common, being unusually rare before the fifth year and after the fiftieth year. As to the pathogeny of this affection of the infra-umbilical reflex nothing positive is known. Jamin, Müller and Seidelman believe it to be a spastic reflex paralysis; whereas Sicard attributes its affection to sympathetic irritation at the level of the intestinal ulceration affecting the gray matter, forming a peripheral block in the reflex impulse. Massalango has suggested that the spinal centers are affected directly by the typhoidal toxines. It seems to me highly probable that its loss may be due to a peripheral block the result of intra-muscular nerve degeneration similar to the degenerative changes so commonly observed in the abdominal muscles from the typhoidal toxines.

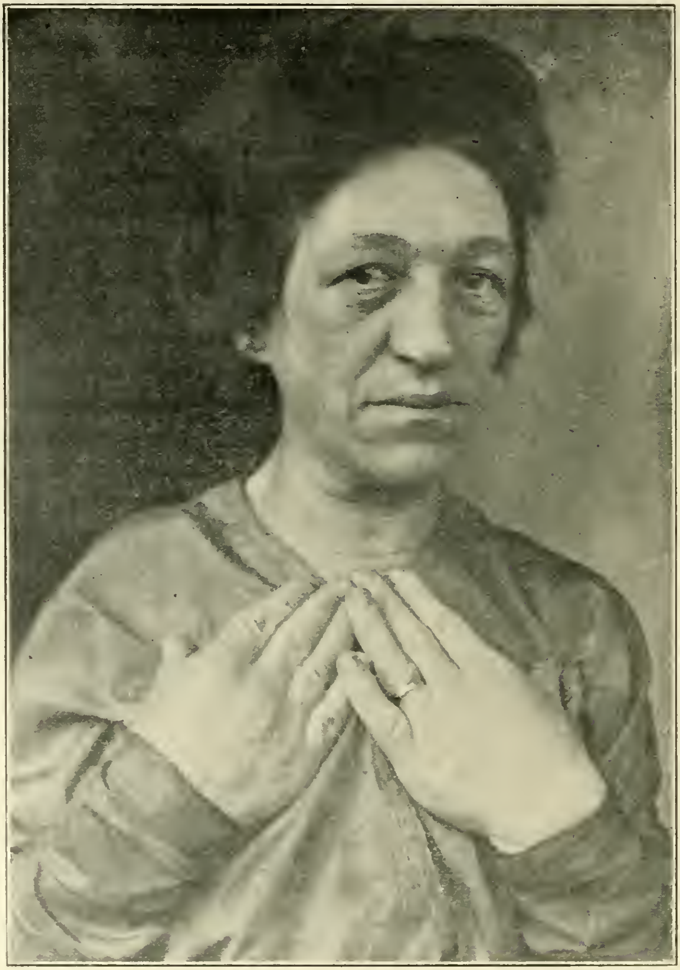
REPORT OF A CASE OF PITUITARY DISEASE (ACROMEGALY), WITH POLYGLANDULAR SYNDROME.

Read before the Medical Society of the County of Albany, March 18, 1915.

By J. L. BENDELL, M. D., F. A. C. S.

Acromegaly has been defined by Marie as "that condition characterized by an increase in size of the face and extremities associated with a perverted function of the pituitary gland."

The experimental and clinical observations on the part of Marie, Marienesco, Babinski, Frohlich, Tamburini, Cushing and others, since the earlier contributions of Marie and Marienesco in 1888-1889, show convincingly, although not absolutely, that acromegaly is dependent upon dyspituitarism or altered pituitary function. Although the time at our disposal does not permit the elaboration of any factors concerned with the experimental work that has been performed in connection with the subject-matter, it may be stated that the weight of evidence at the present time favors the belief that acromegaly is produced by a condition



of primary hyperpituitarism although as in the case of other ductless glands of which the thyroid is the most conspicuous example, transitional states from hyper to hypo conditions by internal secretion are more or less prone to constantly occu

States of dyspituitarism for clinical convenience have been divided by Cushing into five groups, as follows:

Group I.—Cases of dyspituitarism in which not only the signs indicating distortion of neighboring structures, but also the symptoms betraying the effects of altered glandular activity are outspoken.

Group II.—Cases in which the neighborhood manifestations are pronounced, but the glandular symptoms are absent or inconspicuous.

Group III.—Cases in which neighborhood manifestations are absent or inconspicuous though glandular symptoms are pronounced and unmistakable.

Group IV.—Cases in which obvious distant cerebral lesions are accompanied by symptomatic indications of secondary pituitary involvement.

Group V.—Cases with a polyglandular syndrome in which the functional disturbances on the part of the hypophysis are merely one and not a predominant feature of a general involvement of the ductless glands.

The case with which we are concerned may be taken as a type falling in both Groups III and V, inasmuch as neighborhood manifestations are absent or inconspicuous although glandular symptoms are pronounced and unmistakable. On the other hand we have present an unmistakable polyglandular syndrome involving, as will be shown later on, pituitary, thyroid and probably adrenal, although from an objective point of view at least the functional disturbance on the part of the hypophysis is a predominant feature, although in its diagnostic entirety pituitary functional derangement does not completely overshadow the picture of disease.

The case that I am presenting this evening is as follows:

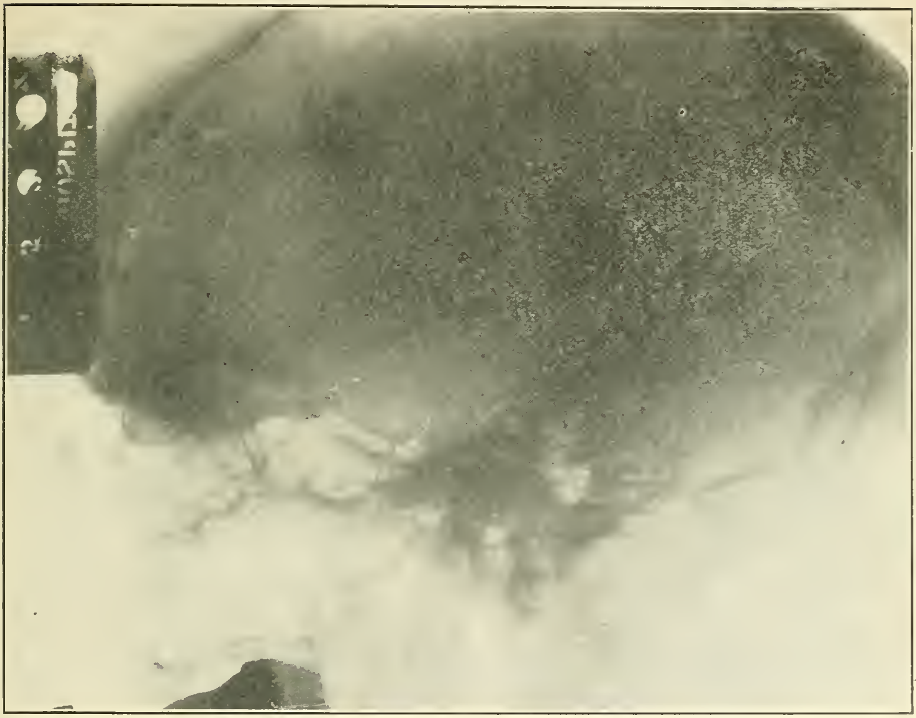
Mrs. S. G. 45. Widow. Born in Ireland; housewife; first seen in February, 1915, complaining of a tumor of the neck causing general nervousness and at times a choking sensation.

Family History.—The patient is one of thirteen children, all in so far as she is aware, being normal individuals. One sister suffered from a goitre several years previously that has since disappeared. There is no family dyscrasia obtainable.

Patient's History.—At the age of sixteen the patient suffered an attack of malaria during a temporary residence on the New Jersey coast. A definite history of what was apparently an aestivo-autumnal type of the disease is obtainable. Menstruation began at the age of fifteen and continued normally up to the age of thirty-nine, at which period (1909), hysterectomy was performed by Dr. Ill of Newark, N. J., for uterine fibroid which had caused excessive hemorrhage. The patient had previously borne four children, two of whom died in infancy and two who have both grown to sturdy adult life.

Existing malady dates back to about 1908 or 1909 at which time, shortly before hysterectomy had been performed the patient noticed the presence of slight thyroid enlargement, which however caused no unpleasant symptoms. Following the operation, thyroid enlargement became more noticeable and although increase in size of the gland has been slow, it has been progressive. The patient is conscious of an increasing sense of nervousness and at times suffers from "choking sensations" as she describes them, although there is no history of interference with deglutition. Synchronously with the appearance of definite thyroid involvement there began an enlargement of the hands and feet which has likewise been slow but progressive. These changes have been more marked within the past two years so that it has been necessary for the patient to have her wedding ring enlarged and gloves two sizes larger than formerly used are now worn. Shoes a size and one-half larger than formerly are also a necessity at the present time. Within the past two or three years the complexion has become darker and pigmented spots have appeared on the face and on the extensor surfaces of the arms. About a year ago vision for reading and sewing became impaired although there is no interference with sight except for close application of the eyes. There has been, however, some intolerance to light. The general health and strength of the patient has remained apparently about the same until within the past few months, during which period there seems to have occurred states of unaccountable drowsiness and muscular weakness. From time to time there is a sensation of tingling in the fingers and toes and the feet tend to remain cold. There is no history of naso-pharyngeal disturbance. Headache is not present, although at the time of the malarial attack frontal pain of a severe character was present. Nausea is not complained of. There is no history of polyuria or polydypsia.

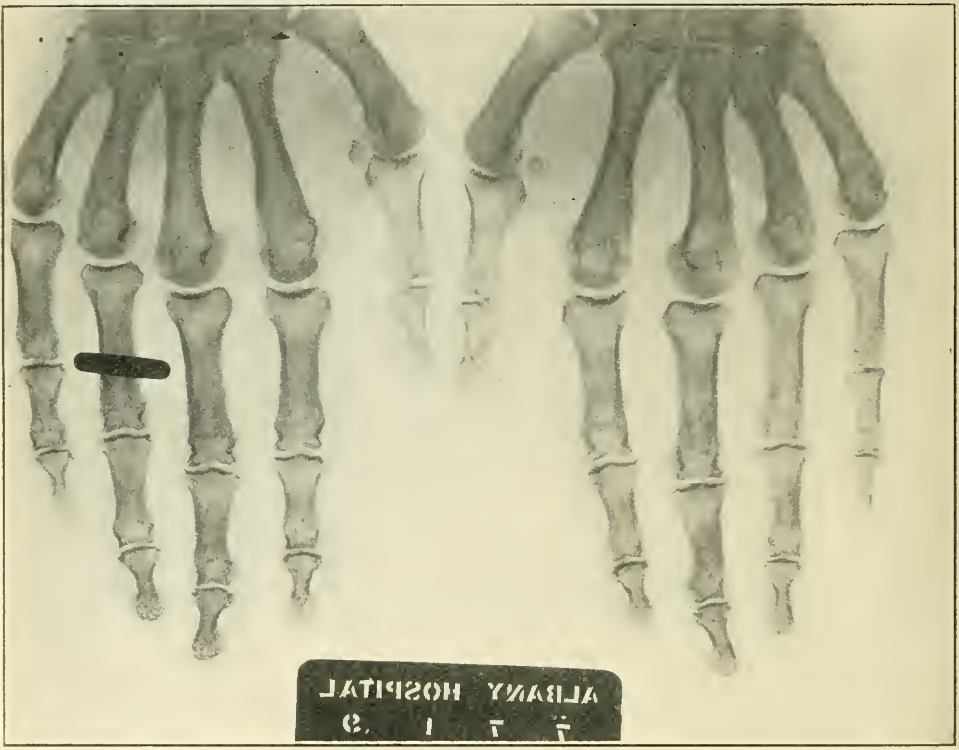
General Physical Examination.—A strongly built adult female of good muscular development and well nourished without superfluous adiposity. No evidence of mental or physical deterioration. There is marked nervousness as exhibited by almost constant movement of the hands and fingers. Weight is 150 lbs. Height five feet six and one-half inches. No general pressure disturbances. Temperature subnormal, 96.81; pulse, 98; irregular in rhythm. Blood pressure, systolic 122, diastolic 80. Pulse pressure 42 (Tycos). General blood examination negative. Urine negative. No glycomia or polyuria. Limit for carbohydrate tolerance not observed. Thoracic viscera. Lungs negative. Heart enlarged in all diameters as shown by radiograph. Soft murmur at apex. Systolic in time transmitted to axillary line. First sound of heart somewhat muffled. No other points of interest in general physical examination.



RADIOGRAPH OF SKULL
Dotted line showing outline of enlarged sella turcica

Analysis of Hypophyseal Symptoms.—(a) Neighborhood manifestations. The X-ray shows a distinct enlargement of the sella turcica which measures two centimeters by one centimeter. A comparison in measurement taken in a cross section of a wet preparation shows the limit of the pituitary fossa to measure one centimeter by one-half centimeter. *Eyes*—negative except for lessened acuity of left eye to twenty-fifty and bilateral sluggish reaction to light. No hemianopsia or photophobia. No exophthalmos. No lowering of olfactory acuity. No rhinorrhea or epistaxis. Nasopharynx negative.

(b) *Glandular manifestation (skeletal).*—The head is large with distinct bulging of the occipital protuberance and both mastoid processes are increased in size. There is general enlargement of all the bones of the face and head. The supra-orbital ridges are prominent. The radiograph shows enlarged frontal, ethmoid and sphenoid sinuses. The jaw shows a fairly large and thick alveolar arch but there is no prognathism nor are the teeth spaced. There is some recession of the gums but no evidence of pyorrhea although certain of the teeth are carious. The nose is wide at the nostrils with a corresponding relatively narrow bridge characteristic of the acromegalic facies. The lips are thick but well formed. There is no decided macroglossia. The entire bony framework is enlarged, the sternum and ribs noticeably so. The hands approach the spade-like type with noticeably enlarged fingers although the latter are supple. Circumference of the middle finger of the right hand at the second knuckle measures 8.5 centimeters. Breadth of the open palm measure ten centimeters. X-ray of the fingers show the characteristic lateral exostoses and terminal tuftings.



RADIOGRAPH OF BONES OF HAND

Showing "terminal tufting" and lateral exostoses characteristic of acromegaly

Cutaneous.—The skin is somewhat moist, soft and of a velvety consistence. There is some puckering and looseness of the skin just underneath the external-occipital protuberance. Skin of the face is somewhat darkened and pigmented with small brownish discolorations of the macular type. This type of pigmentation is likewise observed on the extensor surfaces of the arms. There is no evidence of hypertrichosis. Two small verrucae are on the neck.

Other ductless glands.—The right lobe of the thyroid shows a distinct enlargement—probably the colloid type—soft semi-fluctuant and non-adherent. Evidence of adrenal involvement may be suspected because skin pigmentation and discoloration plus history of asthenia, although the blood pressure as previously given shows no distinct lowering of tension.

Editorial

> It is a matter of the utmost delicacy for a physician to obtrude upon the profession his general statements, in regard either to the phenomena of disease, or the action of remedies. The value of such statements does not depend upon his veracity only, but, must likewise rest in a very great degree, upon the character which he bears as a philosophical observer, and the extent of the observations on which his conclusions are founded. Hence arises the hesitation with which we receive all general statements, when made by persons with whose opportunities of observation and habits of induction we are not acquainted; and the importance which we attach to a simple record of facts, in a concise and accessible form, apart both from hypothesis and system. The author of such a record contributes that which has a fixed and certain value, dependent only upon his correctness in distinctly describing what he has seen; and thus is furnished a series of facts which every practitioner may study for himself, and from which he may acquire a knowledge of phenomena, and of their relations to each other, nearly in the same manner as he does from his own observation.
>
> JOHN ABERCROMBIE.

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The New Catalogue. The delay in issuing the new catalogue this year has been due to the necessity of an entire change in the subject-matter. Dean Ordway has been engaged upon this work since he came to Albany in the spring, and as the catalogue is the expression of the proposed reorganization of the work of the college it has been necessary to perfect the plans of administration before announcement could be made. There are several striking features in the attractive pamphlet now presented. In the first place the close affiliation with Union College is shown not only in the general style, which conforms with the publications of the University, but emphasis is placed upon the University domination and control of the affairs of its medical department. The medical course is now contemporaneous with the academic course in Schenectady, and begins on Monday, September 20th and closes on Commencement Day, June 7th. It thus appears that there will be a general university commencement, and the degrees of all departments will be awarded on the same day and upon the same ceremony.

The present catalogue is distinctive in that a synopsis is given in each separate course of instruction over the signature of the instructor in charge. These are distinct units of the curriculum and are considered in detail. It would appear that definite responsibility is placed upon each instructor in the college for perfection and completeness of his teaching. The underlying principle is that personal attention shall be given to each student, and that the practical work in the laboratories and in the hospitals will be conducted with small groups of three or four students. It is announced that the policy of the college in the future will be to restrict the number of students so that this personal element of instruction may never be lost or even overwhelmed in large numbers. The utilization of the fine laboratories and clinical resources of Albany permits the successful accomplishment of this plan, and there is every reason to believe that the long and honorable history of the Albany Medical College will be continued under the university plan and under this response to the demands of the higher education of the present day.

The ANNALS has already commented upon the qualities of the professors at the head of the departments, but for the purpose of record and for general information appends the completed list of the faculty:

FACULTY AND TEACHING STAFF.

*Charles Alexander Richmond, D. D., LL. D., Chancellor of the University.

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* Member of the Executive Faculty.

James Peter Boyd, M. D., Emeritus Professor of Obstetrics and Diseases of Children.

Cyrus Strong Merrill, M. D., Emeritus Professor of Ophthalmology and Otology.

Department of Medicine.

*Hermon Camp Gordinier, M. D., A. M., Professor of Medicine.

*Thomas Ordway, M. D., A. M., Dean and Associate Professor of Medicine.

Andrew MacFarlane, M. D., Clinical Professor of Medicine.

Jesse Montgomery Mosher, M. D., Clinical Professor of Mental Diseases.

Leo Haendel Neuman, M. D., Clinical Professor of Gastro-Enteric Diseases.

Arthur Sautter, M. D., Clinical Professor of Dermatology and Contagious Diseases.

Henry Larned Keith Shaw, M. D., Clinical Professor of Pediatrics.

Edward Waterbury Becker, M. D., Instructor in Medicine.

Harry Wardell Carey, M. D., Instructor in Medicine.

Frederic Charles Conway, M. D., Instructor in Medicine.

Erastus Corning, M. D., Instructor in Medicine.

Malcolm Douglas, M. D., Instructor in Medicine.

Nelson Kaufman Fromm, M. D., Instructor in Medicine.

Lemuel Whittington Gorham, M. D., Instructor in Medicine.

Clinton Benjamin Hawn, M. D., Instructor in Medicine.

William Kirk, M. D., Instructor in Medicine.

Joseph Patrick O'Brien, M. D., Instructor in Medicine.

Wilson G. Smillie, M. D., Instructor in Public Health.

Edgar Roscoe Stillman, M. D., Instructor in Medicine.

Frank Vander Bogart, M. D., Instructor in Pediatrics.

Joseph Aloysius Lanahan, M. D., Instructor in Dermatology.

James Wesley Wiltse, M. D., Instructor in Dermatology.

Charles Knickerbacker Winne, Jr., M. D., Instructor in Medicine.

LeRoy Solomon Blatner, D. D. S., Assistant in Gastro-Enteric Diseases (Oral Pathology).

Rufus Baker Crain, M. D., Assistant in Medicine.

Theobald Frederick Doescher, M. D., Assistant in Gastro-Enteric Diseases.

Richard Andrew Lawrence, M. D., Assistant in Pediatrics.

Daniel Vincent O'Leary, M. D., Assistant in Pediatrics.

Frank John Williams, M. D., Assistant in Pediatrics.

Department of Surgery.

*Arthur Wells Elting, M. D., Professor of Surgery.

Arthur Joseph Bedell, M. D., Clinical Professor of Ophthalmology and Otology.

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* Member of the Executive Faculty.

John McWilliams Berry, M. D., Clinical Professor of Orthopedics and Roentgenology.

Joseph Lewi Donhauser, M. D., Clinical Professor of Surgery.

John Bruce Harvie, M. D., Clinical Professor of Surgery.

Clement Frank Theisen, M. D., Clinical Professor of Diseases of Nose and Throat.

James Newell Vander Veer, M. D., Clinical Professor of Genito-Urinary Surgery.

William David Aldrich, M. D., Instructor in Genito-Urinary Surgery.

Joseph Lewi Bendell, M. D., Instructor in Surgery.

Edwin Lyon Draper, M. D., Instructor in Surgery.

John Lounsbery Edwards, M. D., Instructor in Surgery.

Charles William Louis Hacker, M. D., Instructor in Surgery.

Peter Lyons Harvie, M. D., Instructor in Surgery.

Charles Henry Moore, M. D., Instructor in Ophthalmology and Otology.

Arthur Sautter, M. D., Instructor in Venereal Diseases.

John Forrest Southwell, M. D., Instructor in Genito-Urinary Surgery.

Arthur Henry Stein, M. D., Instructor in Surgery.

James Wesley Wiltse, M. D., Instructor in Venereal Diseases.

Joseph Ambrose Cox, M. D., Assistant in Surgery.

Edward Gerald Griffin, M. D., Assistant in Surgery.

William Patrick Howard, M. D., Assistant in Orthopedics and Roentgenology.

John Paul O'Keeffe, M. D., Assistant in Diseases of Nose and Throat.

Department of Gynecology.

*John Albertson Sampson, M. D., A. M., Professor of Gynecology.

Paul Tompkins Harper, M. D., Clinical Professor of Obstetrics.

Roland G. Holt, M. D., Instructor in Obstetrics.

Tiffany Lawyer, M. D., Instructor in Gynecology.

Joseph Henry Bowers, M. D., Assistant in Obstetrics.

Darwin Alfred Bruce, M. D., Assistant in Obstetrics.

Wakeman Clark Egerton, M. D., Assistant in Obstetrics.

Guy Swinburne Houghton, M. D., Assistant in Obstetrics.

William Carl Rausch, Jr., M. D., Assistant in Obstetrics.

Department of Neurology.

*LaSalle Archambault, M. D., Professor of Neurology.

Nelson Kaufman Fromm, M. D., Instructor in Neurology.

William Kirk, M. D., Instructor in Anatomy of the Nervous System.

Department of Anatomy.

*Wesley Manning Baldwin, M. D., A. M., Professor of Anatomy.

Thomas Williams Jenkins, M. D., Assistant in Anatomy.

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* Member of the Executive Faculty.

DEPARTMENT OF PHYSIOLOGY.

*Charles M. Gruber, Ph. D., Professor of Physiology.

Arthur Knudson, A. B., Associate Professor of Biological Chemistry.

William Atwood Larkin, Ph. G., Secretary and Instructor in Biological Chemistry and Pharmacology.

DEPARTMENT OF PATHOLOGY.

*Ellis Kellert, M. D., Assistant Professor of Pathology.

Morris Bryan Beecroft, M. D., Instructor in Pathology.

Joseph Lewi Bendell, M. D., Instructor in Pathology.

George Victor Genzmer, M. D., Instructor in Pathology.

The following Special Lecturers have expressed their willingness to take part in the courses in Public Health:

Hermann M. Biggs, Commissioner of New York State Department of Health.

Alden Chester, Justice of the Supreme Court.

J. Newton Fiero, State Reporter and Dean of the Albany Law School.

Theodore Horton, Director, Division of Sanitary Engineering, New York State Department of Health.

Wm. A. Howe, State Medical Inspector of Schools, New York State Department of Education.

DeLancy K. Jay, Secretary of the New York State Department of Health and of the Public Health Council.

Clinton P. McCord, Health Director, Board of Education, Albany.

Fred L. Meader, Director of Division of Communicable Diseases, New York State Department of Health.

John F. Miller, Chief Milk Inspector, City Bureau of Health.

Henry N. Ogden, Professor, Sanitary Engineering, Cornell University.

Lewis R. Parker, Professor, Albany Law School.

Lewis F. Pilcher, New York State Architect.

C. T. Graham-Rogers, Director of Division of Industrial Child Hygiene, New York State Department of Labor.

Wm. P. Rudd, Justice of the Supreme Court.

Arthur Sautter, Health Officer, City Bureau of Health.

H. L. K. Shaw, Director of Division of Child Hygiene, New York State Department of Health.

W. G. Smillie, Instructor in Preventive Medicine, Harvard Medical School.

Augustus B. Wadsworth, Director of Laboratories and Research, New York State Department of Health.

Cressy L. Wilbur, Director of Division of Vital Statistics, New York State Department of Health.

George E. Willcomb, Chemist, Bureau of Water, Albany.

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* Member of the Executive Faculty.

Linsley R. Williams, Deputy Commissioner, New York State Department of Health.

C. E. A. Winslow, Director of Division of Publicity and Education, New York State Department of Health.

H. B. Winters, Deputy Commissioner, New York State Department of Agriculture.

James I. Wyer, Jr., Director of New York State Library.

The Professor of Anatomy.

Wesley Manning Baldwin, A. B., A. M., M. D., was born August 18, 1879. He received his preparatory education at the Brooklyn Boys' High School and his first degrees from Cornell University. The degree of M. D. was obtained from the Cornel Medical College in New York City in 1911. He has taught Anatomy, Histology and Embryology since 1904, having been appointed Assistant in 1904, Instructor in 1907 and Assistant Professor at New York in 1914. He spent one year and a half in research work in the Biological Laboratories at Bonn-am-Rhein, Germany, when he was elected a member of the Deutsches anatomischen Gesellschaft, and six months of the following year, 1913, at Würzburg in the Zoological Institute. He is a member of the Association of American Anatomists. His contributions comprise morphological work upon the human spinal cord, its nerve roots and their topography, and upon the human pancreas together with its ducts and the duodenum; histogenetic work upon the eye and microscopical anatomical work upon a new conception of muscle structure; together with experimental embryological contributions upon the constitution of the fertilized ovum and the artificial production of spina bifida and of other forms of abnormalities by physical and by chemical means. His work upon muscle structure and upon the pancreas has been accepted as authoritative by leading text-books of anatomy in this country and abroad.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.

ABSTRACT OF VITAL STATISTICS, JULY, 1915.

COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

Deaths.

Consumption	28
Typhoid fever	1
Scarlet fever	0
Measles	0
Whooping cough	0
Diphtheria and croup	1
Grippe	0
Diarrheal diseases	13
Pneumonia	0
Broncho-pneumonia	1
Bright's disease	9
Apoplexy	7
Cancer	12
Accidents and violence	12
Deaths under one year	28
Deaths over seventy years	27
Total deaths	153
Death rate	16.37
Death rate less non-residents	14.55

Deaths in Institutions.

	Non-Resident	Resident
Albany Hospital Camp	5	7
Albany Hospital	5	9
St. Peter's Hospital	6	6
House of Good Shepherd	1	1
Public places	4	1
Home for the Aged	0	1
Hospital for Incurables	0	1
Central Federation of Labor Camp	1	1
Albany County Hospital	3	0
St. Margaret's House	2	0
Homeopathic Hospital	2	9
Maternity Hospital	5	2

Births	196
Still births	7

TUBERCULOSIS.

Bender Laboratory Report on Tuberculosis.

Living cases on record July 1, 1915		421
Cases reported:		
By card	31	
Dead cases by certificate	5	
		36
Total		457
Dead cases previously reported	23	
Dead cases not previously reported	5	
Duplicates	1	
Removed	3	
		32
Living cases on record August 1, 1915		425

Total tuberculosis death certificates filed during July		28
Non-resident deaths:		
Albany Hospital Camp	5	
C. F. L. Pavilion	1	
St. Margaret's House	1	
Maternity Hospital	1	
		8
Resident deaths		20

Report of Visiting Tuberculosis Nurse.

Old cases	3
New cases	31
Returned from hospitals	9
Total	43
Disposition of cases:	
Died	14
Sent to hospitals	10
To general tuberculosis nurse	16
Remaining under treatment	3
Total	43
Visits made	52
Visits made, old cases	200
Calls made at B. of H.	24

BUREAU OF COMMUNICABLE DISEASE.

Cases Reported.

Typhoid fever	14
Scarlet fever	14
Diphtheria and croup	8
Chickenpox	5
Measles	15
Whooping-cough	34
Tuberculosis	36
Mumps	7
Total	133

Number of days quarantine for diphtheria:
Longest...... 16 Shortest...... 8 Average...... 13
Number of days quarantine for scarlet fever:
Longest...... 49 Shortest...... 30 Average...... 36 2/6
Fumigations:
Houses.................. 47 Rooms.................. 274

Milk bottles disinfected	93
Cases of diphtheria reported	8
Cases of diphtheria, antitoxin used	7
Deaths after use of antitoxin	0

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria.

Initial positive	21
Negative	210
Release positive	17
Release negative	39
Suspicious	3
Total	290

Test of Sputum for Tuberculosis.

Positive	15
Negative	15
Total	30

Widal Tests.

Positive	12
Negative	33
Suspicious	5
Unsatisfactory	1
Total	51
Milk analyses	80
Water analyses	1

BUREAU OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections. . .	192
Old houses	55
New houses	137
Iron drains	80
Connections street sewers	36
Tile drains	35
Urinals. . .	21
Cesspools. . .	82
Wash basins	183
Sinks. . .	108
Bath tubs	98
Washtrays. . .	85
Tank closets	206
Slop hoppers	20
Shower baths	12
Permits issued	144
Plumbing. . .	100
Building. . .	44
Plans submitted	44
Old buildings	14
New buildings	30
Houses tested	65
Smoke. . .	1
Blue or red	1
Peppermint. . .	1
Water tests	62
Houses examined	45
Re-examined. . .	70
Valid. . .	23
Without cause	22

BUREAU OF MARKETS AND MILK.

Public market inspections	19
Market inspections	57
Fish market inspections	8
Fish peddler inspections	0
Packing house inspections	1
Rendering plant inspections	1
Slaughter house inspections	1
Milk depots inspected	9
Milk houses inspected	57
Milk cans inspected	177
Milk cans condemned	8
Dairies inspected	78
Dairies reinspected	8
Cows examined	780

Cows quarantined	11
Cows removed	4
Complaints investigated	5
Lactometer readings	38
Temperature tests	38
Fat tests	80
Bacterial examinations	73
Sediment tests	84

MISCELLANEOUS.

Work certificates issued to children	36
Number of complaints of nuisances	92
Privy vaults	7
Closets	4
Plumbing	14
Other miscellaneous complaints	67
Cases assigned to health physicians	60
Calls made	131

Medical News

Edited by Arthur J. Bedell, M. D.

QUALIFICATIONS OF HEALTH OFFICERS UNDER THE STATE BOARD.—According to the decision of the New York State Public Health Council local health officers appointed after November 1st, 1916, shall have the following qualifications:

(1) They shall be graduates of medicine of not less than three years' standing. (2) They shall when appointed be not less than 24 nor more than 65 years of age. (3) They shall have complied with one of the following requirements: (a) They shall have taken a correspondence course in public health of one year with at least one week of practical demonstrations in laboratory and field work, both correspondence course and demonstrations to be approved by the Public Health Council with examinations and a certificate; (b) They shall have taken a course in public health of at least six weeks, including practical laboratory and field work with lectures and reading at an educational building, such course to be approved by the Public Health Council with examinations and a certificate; (c) They shall have submitted evidence satisfactory to the Public Health Council of special training or practical experience in public health work, with examination if required by the council. Under special conditions, however, specified in writing by the local board of health or other appointing power or by the health officer, any of these qualifications may be waived by the Public Health Council. The council has also recommended to boards of health that in appointing health officers previous to November 1, 1916, they specify that the appointee agrees to conform to the requirements within the first year of the new term.

CHRISTIAN SCIENCE HEALERS.—*American Medicine* in an editorial on Christian Science includes the following:

"It seems strange after the exposure of the utter ignorance of this cult and the discrediting of their ridiculous claims to cure disease that so many supposedly informed men should be found who would take them seriously. It is no less incomprehensible that the frequent exposure of their wanton assault upon the intelligence of the people, as shown in innumerable actions in the courts should pass unheeded by the law makers of the State and that men could be found willing to vote to allow persons without the slightest knowledge of disease to prey upon obsessed adults and helpless innocent children. And strangest of all few of those thus voting would allow any but the most skilled physicians in the sick room of members of their own family. Surely there must be large profits in the irregular treatment of disease to cause the Christian Scientists and quacks generally to use such persistent endeavors to be allowed to practice medicine.

"Contrary to general opinion the regular medical profession have no objection to State recognition of the new schools or cults. The only demand is that the requirements to obtain a license to practice shall be as stringent and comprehensively strict—in other words offer as definite protection to the people—as the laws enforced against regular practitioners."

VACCINE IN WHOOPING COUGH.—The research laboratory of the department of health has been making extensive investigations in the vaccine treatment and prophylaxis of whooping cough and has reached the following conclusions:

1. Pertussis stock vaccines as prepared by the Bureau of Laboratories seem to have a prophylactic value when given in high doses.

2. In the treatment of pertussis, these vaccines seemed to have shortened the duration and severity of the paroxysmal stage; the average duration of the whoop being twenty-five days compared to forty days of those treated with drugs.

3. Further experiments with the view of obtaining more effective vaccines and a closer co-operation of the profession in public health education, may help in the eradication of pertussis, this scourge of childhood which kills yearly 10,000 American children.

In view of these results the laboratory now seeks the collaboration of private practitioners in a more extensive test of these vaccines. The necessary quantity of vaccine accompanied by a history card and directions for administration will be given to any city practitioner who will promise to report results obtained. In doubtful cases the sputum may be sent to the laboratory for examination. The sputum to be of most value must be obtained early in the disease from the bronchus.

RECALL OF THE RED CROSS UNITS.—American Red Cross surgeons and nurses will be withdrawn from the European battlefield on October

1, because of lack of funds to maintain them longer at their stations. It is possible that the two units in Belgium where the greatest need exists will be continued but the other fourteen detachments will return to the United States.

New York and New England Association of Railway Surgeons.—The twenty-fifth annual session of the New York and New England Association of Railway Surgeons, celebrating the quarter century anniversary of the organization of the association, will be held at Hotel Astor, New York City, October 21, 1915, under the presidency of Dr. W. H. Marcy, of Buffalo, N. Y. A very interesting and attractive program has been arranged. Railway surgeons, attorneys and officials and all members of the medical profession are cordially invited to attend. Further information may be obtained from the secretary, Dr. George Chaffee, 338 Forty-seventh street, Brooklyn, N. Y.

A State Board for the Care of the Feeble-Minded.—Dr. Thomas W. Salmon (A. M. C. '99), Medical Director of the National Committee for Mental Hygiene, recently presented to the State Constitutional Convention a petition for an amendment to the Constitution which would permit the legislature to establish a special expert board to deal with the feeble-minded. The petition directs attention to the importance of providing institutional care or some form of guardianship in the community for the thousands of mentally defective persons who are now at large in the State. It says that a broad constructive State policy for dealing with this subject can be formulated and carried out only by a special commission composed of those who have expert knowledge of the social, medical and educational problems involved.

Activity in the Enforcement of Vital Statistics Law.—Active steps are being taken by the State Department of Health to enforce the law requiring the report of births by physicians within five days. Dr. Herman M. Biggs, State commissioner of health, has sent to district attorneys throughout the State, a list of physicians who have been persistently negligent in this matter and the county prosecutors have been asked to warn the offending physicians that further infractions of the law will be promptly prosecuted. The county prosecutors are practically unanimous in the belief that the offending physicians should be brought to trial. The penalty for violation of this law is that the violator " shall for the first offense be fined not less than $5 nor more than $50 and for each subsequent offense not less than $10 or more than $100 or be imprisoned in the county jail not more than sixty days to be both fined and imprisoned in the discretion of the court.

Personals.—Dr. Albert Vander Veer (A. M. C. '62), Albany, has been elected vice-chancellor of the University of New York by the State Board of Regents.

In June Dr. Vander Veer was elected vice-president of the American Medical Association.

—Dr. Wardner D. Ayer (A. M. C. '10), has assumed charge of the laboratory connected with the Syracuse Bureau of Health, and opened an office for practice in Syracuse, N. Y.

—Dr. Harry S. Howard (A. M. C. '13), is engaged in active practice at 42 Eagle street, Albany.

—Dr. Elmer H. Ormsby (A. M. C. '13), has opened an office in Amsterdam, N. Y.

—Dr. John S. McCormick (A. M. C. '14), is practising at 281 Madison avenue, Albany.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

The Medical Clinics of Chicago—July 1915, Vol. I, No. 1. Published bi-monthly by W. B. Saunders Co. Price per year, $8.00.

This is the first volume of "Medical Clinics" corresponding in form to the well known "Surgical Clinics" of Dr. J. B. Murphy. The volume is a paper covered book of 208 pages illustrated by 37 figures including excellent half-tones of gross photographs, radiographs also reproductions of temperature charts and one colored plate. The general method of case presentation resembles that of certain foreign clinics notably those in Vienna. Somewhat similar clinical lectures in Internal Medicine are also offered in the publications of the Johns Hopkins and the Massachusetts General Hospitals. The latter represent a continuation of the case reports and discussions used by Dr. Cabot in his book on "Differential Diagnosis."

This volume from the Chicago Clinics includes the presentation of cases of lung abscess, nephritis, hepatic abscess, gout, infantile tuberculosis, sarcoma of the kidney in infancy, leukemia, pneumonia, tabes, gall stones, syphilitic aortitis, hour-glass stomach, congenital pulmonic stenosis, aneurism and syphilis of the central nervous system. These cases are reported from the clinics of Drs. Chas. Mix, Chas. S. Williamson, Isaac A. Adt, Robert B. Prebble, Morris L. Goodking, Fred Tice, Walter Hamburger, Ralph C. Hamill at the Mercy Hospital, Cook County Hospital, Michael Reese Hospital and St. Luke's Hospital. This method of imparting medical knowledge has the advantage of being both flexible and personal. This offers an attractive and valuable method of graduate instruction and should give an added impetus to graduate teaching in the United States. This is particularly important during the present disturbed condition in Europe. T. O.

Essentials of Laboratory Diagnosis. Designed for students and practitioners by FRANCIS A. FAUGHT, M. D., Director of Laboratory of the Department of Clinical Medicine and Assistant to the Professor of Clinical Medicine, Medico Chirurgical College, Philadelphia, Pa. 450 pages, 10 full-page plates, 4 in colors, 58 text photographs. Fifth revised edition. F. A. Davis Co., Publishers, 1915.

The form of the previous editions is retained. The discussion of Clinical Pathology is limited as far as possible and the subject matter confined more closely to laboratory technique. A large majority of the useful and many of the less well recognized technical procedures are described. This manual should fill a useful need as a laboratory guide and its compact form and low price place it within the reach of medical students. T. O.

NEUROLOGY.

Edited by Henry Hun, M. D.

An Explanation of the Symptoms of Epilepsy (Die Erklärung der Erscheinungen bei Epilepsie).

G. C. BOLTEN. *Deutsche Zeitschrift für Nervenheilkunde, Band* 53, *Heft* 1-2, 1914.

The term "epilepsy" is used for a great variety of manifestations representing different diseases having great differences in their pathological origin. It would be advisable if possible to adopt some nomenclature which would differentiate this group of symptoms on the basis of their origin and pathogenesis. Epileptic attacks occur under such varied conditions as internal hydrocephalus, tuberous sclerosis, syphilis of the central nervous system, porencephaly, cerebral palsy of children, and as a result of various forms of intoxication, as from alcohol, nicotine, lead, arsenic, diabetes, pellagra, nephritis and the like. There are also traumatic epilepsy, senile epilepsy and epilepsy from cerebral tumors. In all these cases the designation, as epilepsy, arises simply from the character of the attacks.

Excluding all of these disorders from consideration there remains a very large group of cases ordinarily known as epilepsy, which upon the basis of their clinical symptoms might be designated as "genuine epilepsy," and this group includes two diseases which have nothing in common, that is, to say, essential, pure or genuine epilepsy, and symptomatic or cerebral epilepsy, resulting from diffuse inflammation of the cerebral cortex, a form of so-called meningo-encephalitis. Cerebral or symptomatic epilepsy is to be regarded as a condition following diffuse central inflammations, and is to be differentiated from the Jacksonian type, which is entirely local in its origin. The difficulty of diagnosis is increased from the fact that very often localized encephalitic foci result in convulsive seizures of general character. There are many cases however in which there is no primary organic change in the brain, and these are the pure, essential or genuine epilepsy if we disregard the well known endogenous and exogenous intoxications. This last group is in reality a disease of faulty metabolism, and may be regarded as a chronic poisoning, arising both from products of metabolism and end-results of ingested materials, due to diminished discharge and fermentation in the intestinal tract, as well as lack of normal function of the thyroids and parathyroids.

There are consequently contrasted two diseases widely different in pathologic origin but very similar clinically, the one a more or less diffuse organic process in or near the cortex, and the other a chronic poisoning resulting from faulty metabolism which originates in hypofunction of the different glands providing an internal secretion.

Investigations were made of the cerebrospinal fluid by lumbar puncture in six patients, whose symptoms indicated some form of meningo-encephalitis, to determine whether there was increased pressure, whether the fluid was clear or presented an increase of cellular elements, or whether there was an increase of albumen. In every case the result was negative, although in other investigations of cerebral epilepsy much more positive results have been obtained. It has been assumed that alterations in the mentality and personality of epileptics are characteristic of the genuine disease, but this is also a mistake, and especially so when applied to the so-called epileptic character, as for instance, slowness in thinking and speaking, complaining, irritability, intense selfishness, excessive religious sentiment, pronounced egoism, and the like. This mental state is no more specific for genuine epilepsy than for patients suffering from some organic lesion producing symptoms of epilepsy, and the same is true of the so-called epileptic dementia. In fact, widespread meningo-encephalitis advances much more rapidly to dementia than genuine epilepsy. A valuable differential symptom is choked disc, which is of course strongly indicative of so-called cerebral epilepsy arising from meningitis, tumor or some other gross lesion; but, on the other hand, the absence of choked disc is of no help in patients who present epileptic symptoms.

The symptom of left-handedness in epilepsy together with combined conjugate deviation in the beginning of the attacks is a peculiar manifestation. It is known that left-handedness is more frequent in epileptics than in normal individuals, and it has been determined that left-handedness often occurs in the healthy members of families in which there are epileptic patients who do not show this peculiarity. It would appear that left-handedness may be regarded as an indication of epileptic degeneration, and much may be said upon the opinion of Redlich that left-handedness may speak for a diffuse meningo-encephalitis more active in the left hemisphere than in the right.

As a differential diagnosis the symptom is not valuable in so far as it may exist either in epilepsy of an organic base or in the idiopathic form. In a general way the same comment may be made upon the symptom of conjugate deviation, although if this symptom appears regularly in an individual case it speaks for some definite cerebral lesion. In fact, the constant presence of even the slightest focal symptom suggests a local lesion, and these symptoms sometimes occur during the attacks or immediately afterward, even though they are not seen in the incipient period. Among the focal symptoms of this kind may be placed the Babinski phenomenon, one-sided spasms with increased reflexes, mild pareses and the like. When such symptoms appear regularly in a given case they are good evidence of an organic lesion which lies in the hemisphere of the opposite side. When the focal symptoms occur during the attack or immediately after it, it is probable that cerebral epilepsy is present in which the disturbance is more active in one hemisphere than the other, and all these suggestive helps to diagnosis may assume importance if the history of the case may be carried back into early childhood and so point to a remote attack of encephalitis, meningitis or a combination of both. This is particularly true if the history of a sudden attack with fever may be obtained. It is a peculiarity of these local areas of inflammation that they may heal and leave no sign until many years later, perhaps at the end of puberty, when the epileptic attacks may begin.

In fact, some authors, as Marie and Freud, go so far as to say that epilepsy in general may be attributed to some organic change in the cerebral cortex. Marchand seeks the cause of epilepsy in the thickening of the meninges and adhesion with the cortex. All of these forms of cerebral epilepsy are really incidents of cerebral palsy of children, for the paralysis and the convulsions are to be attributed to foci of disease in the motor area or near it, and Freud goes so far as to mention cases in which convulsions occur as incidents of "cerebral palsy of children without paralysis." It should be carried in mind that in this form of epilepsy predisposition is not necessary as a definite lesion is the origin of the symptoms. Many of these cases cannot be differentiated from genuine epilepsy. The same general statements also apply to cases of epilepsy associated with internal hydrocephalus, porencephalus, oxycephalus, or even the symptoms of acromegaly. In these conditions there are undoubtedly such disturbances of circulation in the brain as to produce pressure upon different areas.

Another group of cases are those which appear after the infectious conditions, especially pneumonia, typhoid fever, malaria, influenza, and the diseases of childhood, as scarlet fever, whooping cough and measles. Convulsions follow these diseases not infrequently, even in patients who have no predisposition, and these attacks have all the characteristics of genuine epilepsy. Some infectious diseases, as malaria, typhoid and pneumonia, predispose to meningitis and even to encephalitis, so that the attacks of epilepsy may be classed with the cerebral form as they are based upon an actual organic change in the brain. It is often difficult to determine the presence of focal symptoms in attacks of this character, and the decision as to whether the epilepsy is due to organic cerebral disease or is idiopathic may only be reached at the autopsy.

An analysis of eighty-six cases results in the following classification:

Cerebral epilepsy of children, three entirely unmistakable cases;

Hereditary syphilis: one doubtful case and one definite case;

Traumatic epilepsy: three cases well established by the histories;

Internal hydrocephalus: one probable case, and two definite cases;

Hysteria: one definite case, two probable cases with symptoms of one side only;

Serous meningitis: one case with distinct choked disc;

Heilbronner's "augmenting slight attacks," one case of very uncertain pathogenesis though not to be described as genuine epilepsy;

Emotional epilepsy: two well controlled cases;

Epilepsy following typhoid (meningitis); two cases;

Epilepsy following scarlet fever and pneumonia (meningitis): one case of each kind;

Epilepsy following chronic encephalitis: fifteen definite cases, and eleven probable cases;

Delayed epilepsy: one possible case, and two fairly definite cases;

Tumor of the hypophysis with incomplete symptoms of acromegaly: one case;

Porencephalus: one definite case;

Dystrophia adiposo-genitalis: one case;

Genuine epilepsy: thirty cases.

Thus there were fifty-one cases in the highest probability arising from cerebral lesions; and, disregarding the cases of hysteria and emotional attacks, there remained a series of thirty patients, of whom nineteen were men, and eleven were women and girls, whose attacks might be regarded definitely as idiopathic epilepsy.

The classification of these cases shows that there were only thirty which may be properly regarded as cases of genuine or idiopathic epilepsy, that is to say, less than half of the whole number. The two groups of cases differ in that the one represents some form of organic lesion, which is essentially cerebral in its effects, whereas the attacks of the other group are due to some disturbance of metabolism, as of the thyroids or parathyroids, the effects of which are expended primarily upon the cortex.

Rosenthal's investigations of the blood serum of epileptics are of great interest, and he comes to the following conclusions:

1st. In about half of the epileptics there is an increase of the antiproteolytic inhibiting cells in the blood serum examined with relation to the time of the attacks.

2nd. In the preparoxysmal stage there is usually an increase of the antiproteolytic strength of the serum, which diminishes rapidly to the normal after the attack.

3rd. In the interparoxysmal stage the antiproteolytic control in the blood serum is either normal or only slightly increased.

4th. A marked increase of the antiproteolytic strength in epileptic women occurs immediately before menstruation and is often accompanied by the attacks, although this condition may occur after the convulsive seizures.

5th. Premenstrual increase of the antitryptic strength occurs in normal women, although much less frequently than in epileptics.

6th. The convulsive seizure as such induces a transitional increase of the antitryptic substances. This increase depends upon the intensity of the muscular disturbances during the attacks, is subject to various changes in intensity, and quickly disappears.

In genuine epilepsy there is congenital defect in function of the thyroids and parathyroids, which has definite effect upon the activity of the digestive organs, possibly in reducing the amount of the digestive ferments and the muscular activity of the intestines resulting in absorption of the waste products. In consequence of this albumens and fats are incompletely digested and their side-products are not properly eliminated. It is probable also that inactivity of the breathing apparatus results in the accumulation of carbon dioxide in the blood. These are the different factors leading to improper conditions of the cerebral cortex, to which must be attributed the convulsive seizures. The three organs that are especially effective in this cycle of events are the thyroid, the hypophysis and the thymus.

In conclusion the following assumptions may be made:

1st. Genuine epilepsy and numerous forms of cerebral epilepsy are not clinically to be differentiated from one another. Peculiarities of the attacks, as well as differences in character and terminal dementia, are not available for differential diagnosis.

2nd. Cerebral epilepsy follows any possible disease of the meninges, the cortex and the more deeply lying structures, and this, whether from increase of pressure or from local processes of sclerosis, tend to widespread disturbances of circulation in the cortex.

3rd. Genuine epilepsy is a chronic autointoxication rising from imperfect development and accumulation of waste material, the result of hypofunction of the thyroid and the parathyroid bodies. In consequence of the hypothyroidismus the discharge of many ferments of the intestinal tract and the intermediary waste matters is diminished.

4th. In cerebral, as well as in genuine epilepsy, the cerebral cortex which is keenly susceptible to many poisons, is slowly saturated with toxins.

5th. In all forms of epilepsy the attack must be regarded as a reaction of the organism to rid itself of the toxin. The blood relieves itself of toxins by means of the kidneys, the lungs, and the skin, and the cerebral cortex may discharge part of its toxins into the circulating fluid.

6th. In genuine epilepsy treatment by means of the rectal introduction of fresh extract of the incompetent organs, the thyroids and parathyroids, is indicated until pronounced diminution of the symptoms results. In cerebral epilepsy this form of treatment is without result, although in contrast to genuine epilepsy trephining may bring about some slight relief of the symptoms.

SURGICAL PATHOLOGY.

Edited by George E. Beilby, M. D.

On the Protective Value of Aqueous Extract (Hiss) of Leucocytes in Acute Infections in Animals.

WILLIAM E. YOULAND, JR. *The Journal of Medical Research,* January, 1915, Vol. XXXI, No. 3, page 367.

Youland has attempted to confirm the presence of protective substances in leucocyte extract with the view of extending the use of such an agent in the combatting of bacterial infections. Experiments were carried out upon rabbits and guinea pigs, and staphylococcus, pneumococcus, and streptococcus were made use of in the experiments. It was found that in none of these experiments was absolute protection obtained. In one or two there was a slight prolongation of life, but not sufficient to indicate a distinctive action. In one experiment with a mild infection of staphylococcus there was a conservation of weight. While a decided influence on the temperature was noted in some of the test animals, this is of little significance as all of the animals succumbed. With more severe infection none of these reactions occurred.

The infecting doses in these experiments were severe but the extract was often given in large amounts. While these results do not negative those of Hiss, when considered together they are of some significance. The difficulty of determining the value of a protective substance under such unequal test conditions is well shown. The fact that leucocyte extract cannot be prepared uniformly offers another source of difficulty. Also the fact that the nucleins present in these extracts have a certain influence in these infections must be considered. These facts render border-line infections in susceptible animals like the rabbit all the more unsuitable for such a determination. For these reasons more weight, perhaps, may be given the results of the present work. The possibility of leucocytes containing neutralizing substances within the meaning of immunity is remote. Leucocyte extract apparently exerts its action upon animal infections only in the border-line type of infection, and is without curative value in more constant conditions.

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REPORT OF THE CHAIRMAN OF THE COMMITTEE ON PUBLIC HEALTH OF THE THIRD CAPITOL DISTRICT CONFERENCE ON CHARITIES AND CORRECTIONS.

MARCH 19, 1915.

BY LINSLY R. WILLIAMS, M. D.,
Deputy State Commissioner of Health.

A year ago I had the pleasure of speaking at this Conference on the subject of the amended Public Health Law in New York State and what the amendments to the law aimed to accomplish. Since that time the State Department of Health has been reorganized, as was outlined in my address last year, and I am now able to report some definite results. The most important result is shown in the total number of deaths for the year. There were 144,427 deaths during the year 1914, with a death rate of 14.6 per 1,000, compared to 145,052 deaths in the year 1913 and a death rate in that year of 14.7. This is an actual reduction of only one-tenth of a point. The reduction, however, is more marked when one considers the total number of deaths outside of New York City and the death rate in this area. There were 71,371 deaths in New York State outside of New York City in 1913, a death rate of 15.8; and there were 69,645 deaths in 1914, a death rate of 15.3.

The general stimulation of public health work throughout the State was only begun about the middle of May when the reorganization of the Department might be said to have fairly started. The death rates during the last six months of the year are even more striking, and are as follows:

GENERAL DEATH RATE LAST SIX MONTHS—OUTSIDE OF NEW YORK CITY

	Deaths	*Rate*
1914	32,706	14.3
1913	34,671	15.4

COMPARATIVE STATEMENT BY MONTHS—1915 AND 1914

	Deaths	*Rate*
January, 1915	5,845	14.9
January, 1914	6,375	16.5
February, 1915	5,710	16.1
February, 1914	6,007	17.1

That this is not a transient reduction is shown by the reduction in the absolute number of deaths in January and February of the current year under the deaths for the year 1914. There were actually 530 less deaths in January, 1915, than in January, 1914, and an actual number of 297 less in February, 1915, than in February, 1914. The proposed goal of the Commissioner, the saving of 5,000 lives annually, seems possible if the Health Department is to be supported in its present activities.

The chief feature of the new Public Health Law and the chief results have been the activity of the Sanitary Supervisors, whose duty it is to supervise the work of the local health officers within each sanitary supervisor's district, averaging 65 health officers to each district. The law is specific in stating the duties of the Sanitary Supervisor, and his work is carried on under the direction of the Division of Sanitary Supervisors. A large amount of routine work is performed by them at the suggestion of the Directors of the other divisions. The Sanitary Supervisors are required not only to see that the health officers enforce the Public Health Law but also the Sanitary Code.

THE SANITARY CODE.

The present Health Law provides for a Public Health Council of seven members, of whom the Commissioner shall be one, and that this Council shall enact legislation for the control of communicable diseases and other matters which affect life and health. This Code shall be State-wide in character except for the city of New York. Seven chapters of the Sanitary Code have been enacted as follows:

Chapter I—Definitions and General Provisions
Chapter II—Communicable Diseases
Chapter III—Milk and Cream
Chapter IV—Midwives
Chapter V—Labor Camps
Chapter VI—Nuisances which may affect Life and Health
Chapter VII—Miscellaneous:
  Spitting in public places forbidden
  Common towel forbidden
  Common drinking cups and drinking and eating utensils forbidden
  Barbers and barber shops
  Manicures and chiropodists

One of the features of the regulations controlling communicable diseases is the method of releasing cases of diphtheria from quarantine. Formerly a patient with diphtheria was quarantined on the average 21 days. Now at the present time patients are released when two negative cultures are received on two successive days. This has resulted in many patients being released from quarantine in from 7 to 10 days after the onset of their illness. It has also shown that a large number of patients whose throats appear normal still continue to have virulent diphtheria bacilli in their throats. It has been found feasible to release from quarantine such patients at the end of five weeks, provided the nose and throat appear normal and provided that they remain under the supervision of the local health officer. This has not been found in any instance to have produced bad results. The present Code also allows that whenever a case of diphtheria, scarlet fever or some of the other diseases exist, the adult members of the family may continue their vocations provided it does not bring them in contact with children.

It has also been found possible that whenever any large number of cases occur in a locality to send promptly a Sanitary Supervisor who will direct the control of cases and see that the Public Health Law and Sanitary Code are enforced. Formerly it was only possible for the Department to send a medical expert or diagnostician who would give instructions, but who was not able to remain and see that such instructions were carried out. The present method has enabled the Department to promptly curtail a widespread epidemic of smallpox in the western part of the State and also to control a number of smaller epidemics of typhoid fever, septic sore throat and other diseases which have occurred throughout the State.

The Public Health Council has also enacted a chapter of the Sanitary Code on the control of the milk supply and the grading of milk. At the outset it caused considerable opposition but since it was learned that it did not drive out of business any except those who produced milk in a highly insanitary manner, and allowed producers of milk to secure in some instances a higher price for their product, the opposition grew less marked until now apparently the majority of persons are in favor of such a grading of milk. The milk code divides milk into Grades A, B and C, both raw and pasteurized, and describes what certified milk shall be; specifies what pasteurization means and how it may be performed; and requires all dealers in milk to receive a permit from the local health officer.

The operation of the new Vital Statistics Law went into effect on the first of January, and it has been possible to secure the more prompt reporting of births and deaths, although there are still a number of instances where physicians are slow in reporting births, and action has been taken in some instances calling attention of the local district attorney to the fact that these physicians were violating the law.

Infant Welfare.

As soon as the Division of Child Hygiene was organized a census was taken of the number of Infant Welfare Stations already established and this revealed the fact that welfare stations existed in only 12 municipalities. A campaign was immediately organized to reduce the infant mortality throughout the State. It was felt that this could be accomplished best by popular exhibits accompanied by lectures and demonstrations. The object of the campaign was to educate the mother in the care and feeding of her child; to arouse the community to the necessity for child welfare work; and to point out that a high infant mortality was unnecessary.

Forty-five cities were visited and 150 popular lectures were given during the months of April, May and June. During the summer months 57 fairs were visited, at which it is estimated that over 1,000,000 people were in attendance. Seventy-five thousand copies of leaflets and pamphlets printed in English, Polish and Italian were distributed by the nurses in charge of the exhibits. The results of the campaign can be ascertained by a study of infant mortality statistics for the last six months of 1913-14. In 1913 the rate from July to December was 137 deaths of infants under one year of age to every 1,000 living births. In the last six months of 1914 this mortality was reduced to 112 deaths of infants under one year per every 1,000 living births. This reduction in the infant mortality corresponded to a saving of over 1,400 infants' lives. In 32 of the 45 cities visited by the exhibits the infant mortality rate fell below that of 1913; while of the 12 cities not reached by the exhibit in only four did the rate fall below that of 1913. There was also a marked reduction in the number of diarrheal deaths, as there were 3,308 deaths from this cause in 1913, and only 2,845 in 1914. In 1913 there were 32 infant welfare stations in 12 different municipalities, while during the year 1914 this number was increased to 67 infant welfare stations in 32 different localities. These figures speak for themselves. As a result of them the work of the campaign against infant mortality will be continued. It may be of interest to point out that the infant mortality rate in January was lower than that of New York City for the first time since records have been kept for New York City and the rest of the State.

Laboratory Facilities.

The work of the State Laboratory has been reorganized and made much more accessible for the health officers and physicians of the State. There has been a marked increase in the diagnostic work in diphtheria, tuberculosis and typhoid fever, and it has been possible to render reports more promptly to the health officers. Typhoid vaccine has been manufactured and distributed in a limited number of localities. The diphtheria antitoxin has been standardized and sent out, and a branch laboratory in New York City has been established in order to render reports to Long Island and counties adjacent to New York City more promptly than heretofore.

It has been found that there are a number of laboratories throughout the State which are equipped for diagnostic work, and the Director of the State Laboratories has inspected county and municipal laboratories at Utica, Syracuse, Auburn, Canandaigua, Rochester, Batavia, Buffalo. Ithaca, Corning, Elmira, Binghamton, Tuxedo, Patchogue and New York City. The Laboratory of the Department is now in close touch with all these laboratories and is lending all the support possible under the circumstances. An earnest effort has been made during the past year to keep health officers adequately supplied with antitoxin and other supplies of the Laboratory in order that they may be ready to take prompt action in the case of an outbreak of any disease.

Public Health Education.

One of the most important activities of the Department has been public health education, in an endeavor to educate not only the physicians and health officers as to the importance and opportunities of public health work, but also to enlist the support and cooperation of the citizens for their own protection and in their own behalf. This work will not be referred to, as, in another address this morning it will be gone into in more detail.

Public Health Nursing.

Public health nursing has been extended by the Department. Eight nurses have been employed, and they have assisted in the infant welfare campaign and are also assisting in organizing Little Mothers' Leagues, enlisting the cooperation of older girls who will pledge themselves to do something every day for a baby. They are engaged in supervising the midwives; investigating the amount of tuberculosis throughout the State; making accurate surveys of counties where no facilities or inadequate facilities for hospital accommodations exist. Specific accomplishments in tuberculosis are reported in various parts of the State—Chenango, Nassau, Lewis, Suffolk counties having voted at a referendum to appropriate money to establish a tuberculosis hospital, and a county hospital has also been considered in several other counties. It is likely that additional counties will vote to establish a tuberculosis hospital during the present year.

WATER SUPPLIES.

The improvement of the water supplies of the State has been progressive and chlorination plants have been introduced in a number of cities where typhoid fever has been marked, notably Dunkirk, Lockport and North Tonawanda. Saratoga Springs has voted to build a filtration plant for their water supply, and other cities and villages have made progress in improving the water supply of their municipalities. The total number of deaths from typhoid fever, which is largely a water-borne disease, outside the city of New York in 1913 was 656, and in 1914 there were 533.

Public health nurses have been employed in various cities in the general movement for the prevention of disease, and the promotion of the health of the State has made a marked advance over the year previous. The goal set by the State Commissioner of Health—that of saving 5,000 lives a year during the next five years—seems possible of attainment.

There are numerous other features of public health activity, but these can not be touched upon in the limited time.

PROBLEMS OF PUBLIC HEALTH EDUCATION

Read before the Third Capitol District Conference of Charities and Correction, held at Albany, N. Y., March 19-20, 1915.

By C-E. A. WINSLOW,

Director, Division of Publicity and Education, New York State Department of Health.

It is in large part to the social worker that we owe the discovery of popular education as an integral part of the public health campaign. It was in the campaign against tuberculosis that the importance of reaching the individual citizen and teaching him about the conduct of his individual life was first definitely grasped. In the case of this disease it was quite clear that the most important of all measures were those which built up the vital resistance of the body and maintained the fighting edge which is so effective against this particular microbic enemy. Sanitary shops and tenements were needed; the sanitary care of sputum was needed; but, above all, healthy habits of individual living were essential. Hence the antituberculosis movement became a great campaign of popular education. It was animated by a new idea, the idea of bringing hygienic knowledge right to the individual in his home or in his shop; and it developed a new machinery, a new system of organization for bringing about this end. The general antituberculosis movement began in the United States in 1904, and since January, 1905, antituberculosis organizations have increased from 24 to 1,228; sanatoria, hospitals and day camps from 115 to 527; dispensaries from 19 to 395. In doing this work the medical and sanitary experts, and particularly the social workers, not only pointed the way to a conquest of the great white plague, but set in motion forces which are revolutionizing the campaign for public health in every field. The same thing has happened more recently in the movement for the reduction of infant mortality. Budin began his conferences with nursing mothers in 1894, but for ten years more public health officials were chiefly concerned with attempts to improve an artificial milk supply, while the central features of the problem, the child and the mother, were ignored. When the first American Conference for the Prevention of Infant Mortality was held at New Haven in 1909 it was surprising to see how experience from every organization dealing with the problem had focused on a single point. Man after man said in effect that he had come to feel that the success of his station could be gauged, not by the quarts of milk distributed, but by the nursing mothers under instruction. The movement for the reduction of infant mortality became at that meeting, consciously and definitely, an educational one, and its prime task is today recognized, as clearly as in the case of tuberculosis, to be the task of carrying sanitary and hygienic knowledge into the individual home.

Education, then, is the keynote of the modern campaign for public health. Tuberculosis and infant mortality are preeminent among all the causes of preventable disease and death as the greatest scourges, from the abatement of which the largest results for humanity are to be attained. In each case the fight must be won, not merely by the construction of public works, but by the conduct of the individual life. The same thing is true with regard to the spread of the acute contagia, the burden of venereal disease, the obscure ill-effects of defective eyes and ears and teeth, and a dozen other problems which in greater or lesser degree concern the public health. In every one of these cases the results we are striving for can be reached only by spreading a clear knowledge of the ways in which disease spreads, and the ways in which it is prevented, among the mothers who bring up babies and the men who pay rent in the tenement and work in the stores and factories.

As an illustration of what may be done along this line of public education, I may cite the efforts being made by the New York State Department of Health to bring about a more effective contact between the expert who has the knowledge and the individual citizen who must make use of it.

The monthly bulletin of the department is our official organ of communication with the public, and this bulletin we have first of all attempted to popularize and to convert into an effective medium of education. We have changed its name to *Health News*. We have banished from its columns all long and technical discussions (which, when necessary, are issued as special bulletins to a selected mailing list). We have attempted to print in each number half a dozen brief articles on timely health topics by men of national reputation in their respective fields. We have paid special attention to real news items in regard to current sanitary problems and sanitary progress in the State. Each number is illustrated with cartoons, diagrams and photographs. The edition has been enlarged to over 30,000 copies, and it has been mailed during the winter months to each of the 15,000 school principals in the State. We look forward in the future to a day when biology and public health shall occupy not a subordinate, but a central position in the school curriculum.

In order to come in touch with a wider public than we can hope to reach with our own publications, we have asked the newspapers of the State to cooperate with us, and have met with generous response. We send out each week a 500-word health hint on such topics as Infant Feeding, Hot Weather Hygiene, Health on the Farm, County Hospitals and Taxes, Cancer a Preventable Disease, and the like. The "Hints" are mailed in proof or in electroype, as desired, and 468 daily and weekly papers have been using them each week throughout the State.

We estimate that by this means we are reaching 1,500,000 readers.

The printed page must be supplemented by a more striking and vivid appeal to the eye and the popular exhibit should form a part of any well-organized public health campaign. The work of the New York State Department during the past summer was centered particularly upon the prevention of infant mortality and to aid in this campaign we prepared three child welfare exhibits, which between April and July were shown in twenty-five counties of the State. These exhibits led in many cases to the establishment of infant welfare stations, and in every community through which the exhibits passed there has been left a trail of enthusiastic and constructive infant welfare work. During the fall these infant welfare exhibits and others dealing with rural hygiene, have been shown at fifty county fairs throughout the State. The Department arranges for lectures upon health topics whenever requested and the members of the staff as well as the sanitary supervisors are kept busy filling engagements of this kind. Three special lecturers on diseases of the eye and ear, on mouth hygiene and the care of the teeth and on social hygiene are attached to the Department, and we have prepared and printed a series of syllabi of lectures on the more important public health topics with a set of lantern slides corresponding to each lecture which may be sent out on request for the use of health officers and other local lectures. Original moving picture films dealing with infant welfare work and rural hygiene have also been prepared for use.

One of the next tasks of the future, as it seems to me, is to add to the training of the public in the elements of hygiene and sanitation some plan of organization which shall make our health militia effective for all forms of necessary common action.

The city or village or town is the place where the public health campaign must ultimately be fought and won. The State Department of Health and various State-wide private organizations may educate and stimulate and advise; but a successful outcome can only be secured by an earnest local conviction that public health work is worth while and an intelligent local comprehension of the methods by which it should be carried on.

Much progress has been made during the past decade in arousing public sentiment as to the need for activities along health lines. Many communities now have Infant Welfare Stations, Visiting Nurse Associations, Tuberculosis Committees and other organizations which include public health work more or less prominently in their programs. It is unfortunately true, however, that as a rule the activities of these various organizations are not effectively correlated, and sometimes they are working at cross-purposes with each other and with the local health officer. I have in mind one particular city in which a new organization had to be formed to start an Infant Welfare Station because the local health officer could not be persuaded to take the initiative, where, on the other hand, the Visiting Nurses have not cooperated with the health officer by reporting cases of communicable disease that came to their attention; while the Nursing Organization and the Charity Organization Society have been continually at loggerheads.

It seems to many observers of the situation that correlation and coordination of local health activities is one of our most pressing needs.

If there were a central health council in each community, representing all the various health activities, it might serve as a valuable board of strategy for utilizing the health forces of the community to the best advantage. Such a central council would, of course, have no power to control the action of agencies already in existence. Its meetings, however, would act as a clearing-house for information as to overlapping and as to unfilled needs. It would give to all its constituent organizations a clearer view of their work in relation to the whole problem, and the council once formed would be in position to plan new health activities intelligently and to bring an organized force of public opinion to bear for securing funds from either public or private sources.

The group of half a dozen or a dozen representative men and women constituting such a council would naturally become members of the American Public Health Association so as to keep in touch with the current progress in the health movement as a whole; and with the advice of the local health officer and the State Sanitary Supervisor they could determine what particular health need was most urgent. In some communities purification of the public water supply, in others an infant welfare station, in others a visiting nurse or a county hospital, or a contagious disease hospital, or a venereal clinic, might be the most essential factor in reducing the death rate. In each case public attention could be focused on this one end till it was attained.

It would not, as a rule, be desirable for such a movement as is here outlined to be inaugurated primarily by the local health officer himself. If a public official is too dominant a factor, private initiative is likely to be destroyed and criticism invited on various grounds.

On the other hand, it is essential for the best results that the local health officer should be a member of the Central Health Council and that his judgment should be given great weight in its deliberations. Legal authority and constructive initiative must work together if a maximum effect is to be produced. It is one of the most unfortunate aspects of the present situation that too often the public distrusts its official sanitary leaders. Sometimes one fears that this distrust is justified. Frequently, however, it has its source in the fact that the private individual fails to realize the practical difficulties which prevent an immediate attainment of essentially desirable ends. It must be remembered too that the growth of public sentiment in favor of sanitary reform is of recent date. Many a health officer who has given long and faithful service does not realize what can today be accomplished with the support of aroused public opinion. Once assured of such support he will be found ready and eager to move forward along progressive lines.

While it is necessary to correlate the voluntary health activities of any community as closely as possible with the health authorities, it is, on the other hand, quite as essential that the movement should reach outward so as to rest upon a broad base of enlightened public sentiment.

There are two distinct reasons why the enlistment of a wide public is vital to the success of the health campaign. In the first place, the individual citizen must be taught the principles of hygiene and sanitation for his own use and application. The reserves are always at the front in the campaign against disease and the battles are in the nature of a guerilla warfare in which each one must be taught to do his part. The National Health Guard of the Life Extension Institute is an admirable example of organization for such purposes as these.

It is not alone for education in the laws of individual hygiene and sanitation, however, that the public should be enlisted in the health campaign. If we really want to prevent preventable disease, we must supply the machinery, the fortifications and munitions of war to use against the enemy. We must install effective water purification plants and adequate systems of sewerage and sewage disposal. We must provide infant welfare stations in the proportion of one for every 20,000 of the population, if the death rate of infants is to be effectively reduced. We must have adequate systems of medical school inspection and school nurses, not one for each 2,500 school children, but one for every 1,000, if our young soldiers of peace are to come to maturity in full vigor and free from physical defects. We must build contagious disease hospitals, with a capacity of one bed for every 2,000 of the population. We must provide tuberculosis hospitals with a capacity of one bed for every 1,000 of the population for the cure of early and the isolation of advanced cases of this disease, and a corps of visiting nurses to find incipient cases and secure proper care for patients in the home. All these things cost money; and in order to secure them we must have in each community an aroused and organized public opinion such as has been for some years exemplified in the Public Health Association of Rochester.

A Central Health Council correlating and coordinating existing health activities and planning definitely and constructively for the future—working in cordial harmony with the local health officer, and forming the nucleus for a local Public Health Association, Life Lengthening League or Health Guard Chapter, bringing together as large a number of citizens as possible for health education and common action—these would seem to be the desirable elements in an effective plan of local organization for public health.

PUBLIC HEALTH NURSING AS A COMMUNITY SERVICE.

Read before the Third Capitol District Conference of Charities and Correction, held at Albany, N. Y., March 19-20, 1915.

By KATHARINE B. WHITMORE, R. N.

Public Health Nursing as a Community Service has unlimited possibilities for a field. The nurse who is fond of people, old and young, can wield an influence for better health conditions which will go on vibrating for years.

A nurse with enthusiasm who can inspire the women of a community to a forward health movement has the greatest possible power and a strong, steady progressive educational spirit is the result.

Today these problems are well advanced in the large cities. It is my pleasure and interest to observe the conditions in the rural sections. In these communities we have a sturdy, self-confident manner in our people which often implies, if they do not say it, " we are satisfied, let us alone." However, when they are once interested, like starting a wheel which for a time goes by its own velocity, they will make every effort to find a reason for or against the proposed new methods. One of the best avenues to reach these communities is through their Women's Clubs, which are organized solely for the advancement of women, and include all the civic, educational and health topics. The literature circulated by the State Department of Health on public health subjects, has created a keen interest to learn the practical application of the health and hygiene lessons there presented.

Not all good nurses make a success of Public Health nursing. It is to be deeply regretted that when a nurse makes a failure in a commuuity, that particular community will take years to see that it is best to again employ a Public Health nurse. A nurse must be a specialist in this line of nursing service to make a success of the work. In two instances where a nurse was not adapted by personality to the community spirit a failure has followed. In both instances the professional ability was not questioned, it was the personality—all due respect to the nurses. The loss of the community's confidence in a Public Health nurse is a serious matter in this early stage of advocating Public Health nursing in that particular community.

The tuberculosis campaign so successfully carried forward in the State since 1908 has, I believe, reached the most remote homes. However, in some instances it creates an unnecessary fear, even unkindness to the ill, and needs the personal application of the instruction. Health officers are asking if there is not some way of obtaining personal instruction on all health matters for the people. Interest is keen and people are seeking answers on questions pertaining to health, and those who do not seek it need it the more.

A physician told me that he had a young man in his care who had slight pulmonary hemorrhages. He ordered a reclining position, full diet, quietness, and if he observed these instructions he had every prospect of recovery. They were well-to-do people, and certain members of his family said he needed exercise. Rather than offend their family doctor by refusing to follow his instructions at home, they put the young man on a farm to work. He died a few months later of hemorrhage. The doctor said the family needed education on health lines. It was clearly a case where a nurse by daily visits and instructions would have won out.

From the Public Health literature we are having results. For instance, while in a health office a young mother came in to see if the doctor had recorded the birth of her six months' old baby. She said all the neighbors who had babies had received from the State Department of Health a booklet called "Your Baby and How to Keep it Well." She had not received such a book and was anxious to know the reason. The birth record was then taken care of.

Another mother with a seven-year-old boy came to an exhibition booth and said she had read that a child should not sleep with its mouth open, and what should she do? The boy kept his mouth open day and night, and she had sat up nights at a great loss of sleep, to hold the boy's mouth shut and had even tied it shut, again and again, but all methods had failed—the mouth was wide open. She promised to take the child to a physician the same day.

In this rural problem there are comparatively few foreigners. For the most part we have a provident, thrifty people, ready to work and to work hard for their living. In three different localities I inquired for the overseer of the poor. It was taken as a joke. They didn't know if they had such an official or not. Anyway they had little or no use to call on him. Though incomes might be small the cellars were well filled with vegetables, apples, smoked and salt meat, the housewife had dried fruits, and preserves and relishes for use during the winter, and the enormous wood piles indicated that the price of coal was no concern of theirs. These same people will learn your business in their community before you do theirs. And the questions they ask will tax your knowledge of all you know now or ever have known. Note the opportunity for telling the stories of all Health and Hygiene, and there is no doubt but that they will be tried, for the spirit of finding is there. Even one instructional visit on ventilation will start a fine discussion in a community, with pleasing results.

The State Medical Inspection of school children so carefully and painstakingly made and recorded, and recommendations made to parents, who too often pay no attention to the careful diagnosis, is another field now open and time is being lost for these children, because no one enforces these recommendations. No one can do this so well as a Public Health nurse in the community.

Of the movement of the County Tuberculosis Hospital, with 29 established, there is a call and a welcome for the Public Health nurse to carry the spirit of recovery into the homes of the ill, along with the literature, and "prevent the spread," instruction, until such time as adequate hospital provision has been made, and I believe they would be forceful factors in promoting the building of County Tuberculosis Hospitals.

An interview with a school principal brought out the story of one girl dying of tuberculosis, later the girl who had sat next to her died of tuberculosis. A third girl, who associated with the first two, is in the care of a doctor and overcoming early symptoms of the disease. At this time he and school board are much aroused and are now keen for first symptoms.

The Baby Welfare movement is rapidly progressing. One health officer who had opened a welfare station last year said, "You see, all we knew about it was from the State Exhibit. The plan being new to the public, the nurse and myself, it was not all we hoped for. However, with the help of a State nurse we enrolled 32 babies (in a village of 8,000) in one month." He was confident of an improvement the coming year over the past summer. He has funds in hand and fine cooperation of the citizens. Not any public nurse work had preceded in the community. This shows the readiness of the public to promote better care for babies.

One health officer expressed sincere appreciation of the good resulting from a lecture given by a member of the State Department of Health last winter on tuberculosis. He said the people talked about the points made. and from that lecture he has had better cooperation from the citizens. They do not try to hide their illness as formerly. He said it did more to educate the people and put them in touch with the public officials on the subject than anything ever had before, and he wished that they could have more and more education on hygiene. These conclusions are based on personal interviews with 90 physicians within a few months. The health officers especially are asking for nurse help to carry into effect the message "Keep well people, well."

The *success* of the whole forward health movement is to carry the *messages* and the *plans* of our *leaders* to every *home* and every person, in such manner that they *will* believe and live it.

PUBLIC HEALTH NURSING AS A COMMUNITY SERVICE

Read before the Third Capitol District Conference of Charities and Correction, held at Albany, N. Y., March 19-20, 1915.

By ELLA PHILLIPS CRANDALL,

Executive Secretary, The National Organization for Public Health Nursing.

The growth and development of what is now called Public Health nursing is very well known to an audience of this sort. It began as district or visiting nursing, which was limited to the bedside care of the individual in his home, and largely, to poor citizens. Gradually, in response to the constant and ever-increasing and varying demands of the public health campaign of the past decade, it has taken on the specialized forms of "tuberculosis nursing," "school nursing," "infant welfare," "hospital," "social service," "industrial nursing," "mental hygiene," and various other activities which are now collectively termed "Public Health Nursing."

There is another significance in the term and that is whereas the service of the nurse in the earlier days was chiefly curative, it is now educational and preventive. In other words, the curative service is no less valuable and no less valued by the nurses themselves, but instead of being an end, it is a means unto the larger end of prevention and education.

Throughout the history of the various campaigns against tuberculosis, in behalf of better school hygiene and infant welfare, etc., there has been a constant need of an interpreter and a following-up agent. No amount of lectures or printed matter, nor administrative control is sufficient to make plain to the people the scientific knowledge that has been gained in our laboratories nor the meaning and purpose of the laws that have been enacted for their benefit, except as someone takes the message to them individually in their homes. The simplest English language does not suffice in many cases. It is necessary that the interpretation be given by .demonstration and it is, therefore, most logical that the visiting nurse, herself having been taught by demonstration and practice, should in turn be chosen as the teacher of health and hygiene, the interpreter of the new health knowledge and health laws to the ignorant and foreign-born people, and it has now become an accepted fact that the visiting or public health nurse is an essential factor in the public health campaign.

As a result of the gradual awakening of the public conscience and consciousness to the needs of preventing tuberculosis, and of school hygiene and of infant welfare, these several activities have grown up as specializations of general public health programs. Special appropriations have been made; special people have been designated to perform the service, and we have now many specialists, as I have indicated, within the group known as public health nurses. As a result, the time is already at hand when in our larger cities we have duplication and overlapping in the nursing service. It is not my intention this morning to discuss this fact, neither to defend nor excuse it. The fact exists; is clearly recognized by those who are responsible for it and such measures of correction as are practical at the present time are being considered; but I should like to discuss, if I may, the interests of the small towns and rural communities in this connection.

The development of the public health campaign has so much more recently reached the small towns and rural communities that there is still time to start many of them in a better way, and, therefore, I would present to you a plan which I offer as an individual, not in my official capacity, nor as having had the endorsement of the committee which has invited me to speak; although, as I shall show you, it has ample authoritative endorsement. I ask your serious consideration and your frank criticism of it.

Ohio has, in the Division of Tuberculosis and Public Health Education of its State Department of Health, a supervisor of nursing who, though employed by the division of tuberculosis, is known as "public health supervising" nurse, because there and in many other states the anti-tuberculosis agencies are saying: "While we are working under antituberculosis appropriations, we recognize that all our efforts lead to a general public health program and we must have nurses who consider the anti-tuberculosis campaign in that light."

In a similar manner, though less clearly defined as yet, infant welfare, school hygiene and other specialized propaganda are being recognized as inseparable parts of the general public health movement.

Best of all, our own splendid law provides that any community in New York State may tax itself to supply general public health nursing service for all classes of people and for all diseases. As has been said, there are already eight supervising public health nurses maintained by the State Department of Health. Furthermore, as a direct result of the extraordinary provision for public health education, one seldom goes into any section of this State now-a-days without finding the people in the smallest hamlets and even in the rural districts talking enthusiastically about the possibilities of local health protection, and often calling for a "community nurse." This term signifies to them a general public health nurse, available to all the people. It is freely granted that in the early days of each new propaganda, whether public or private, it is altogether necessary and desirable that special nurses, special exhibits, special appropriations be furnished until the public is fully aroused to its importance and willing to make adequate appropriations for it, but when the time comes that the small communities undertake to maintain an infant welfare nurse, a school nurse, a tuberculosis nurse and a general visiting nurse, it is quite impossible for them to tax themselves sufficiently to maintain several nurses for these various services. Furthermore, there wouldn't be work enough for them unless the territory were greatly extended to take in the surrounding country and even if that were always possible, it would be an uneconomic policy and lacking in efficiency. Moreover, the town is often ready for such an appropriation before the outlying territory sees fit to undertake the same obligations.

There are various precedents for a general service which have worked out satisfactorily to all concerned. They are usually supported by appropriations from the school board, the department of health, the poor relief officers, possibly the town treasury, and, if necessary, the citizens make up the deficit.

The administration of such a service has been very well worked out in both small and large communities through what is known as a Central Committee on which sits a representative of every agency or board that is contributing to the support of the nurse; for instance, the health officer, the superintendent of schools or medical inspector, the poor relief officer, and a number of private citizens. Such a committee as this can also serve in an advisory capacity to the nurse in lieu of a nurse superintendent, although it can not actually supervise her technical work. Even when provision is made for technical supervision, such as the Department of Health of this State has instituted through its staff of supervising nurses, local committees are still very helpful if not quite indispensable.

When the State Department of Education introduces its nursing system it will still be possible for a local nurse doing general service to report to two supervising nurses, one under the direction of the Department of Health and the other under the direction of the Department of Education. Her records will, in like manner, be prepared on special forms representing the two kinds of work.

I cannot emphasize too strongly the fundamental importance of nurse supervision, because only through the supervision of a fully qualified nurse can the nursing standards either of State or local employees be assured and maintained. It is most gratifying that New York State has assumed the cost of supervision. Let us hope that all the states will soon follow her example.

One of the greatest indictments ever brought against the nursing profession is that it has so long and completely neglected to care for the great middle class of our citizenship. They have taken care of the very poor when they consented to accept charity and of the very rich because they could pay for the service, but the middle class of people could not afford the graduate resident nurse and would not accept the visiting nurse because she was generally known as a charity agent, and therefore they have been dependent upon the untrained or practical nurse. Yet nurses alone could not solve this great economic problem.

There are many instances where so-called practical nurse service is all that is needed. This happens in the homes of the well-to-do as often as in others, but may the time soon come—and New York has done most to bring it about—when a patient's physical need and not his financial status may determine whether he will have the services of a graduate nurse or a trained attendant. This Public Health Law, putting the public health nurse at the service of all people, is the first adequate step toward providing uniform nursing service to people of all classes. It remains for all people to avail themselves of it: the rich and poor alike. This is important because the wage-earner just above the poverty line will not hesitate to accept a service furnished at public expense which his well-to-do neighbor calls upon, but he will shun it if only his poorer neighbors utilize it.

A great deal of public money has been appropriated for educational nursing such as school and infant welfare and tuberculosis work, but under our new law we believe it will be an easy step to persuade the public to call upon the community nurses for actual nursing service as well as for instructive and educational care.

The compelling word of our honored Commissioner, Dr. Biggs, that " Health is Purchasable," has already sunk into the minds and consciences of the American people to such an extent that from all quarters of the land evidences are seen that they and their representatives are thinking of sickness as a community liability and health as a community asset. In 1912, President Wilson said, " The welfare, the happiness, the energy and spirit of the men and women who do the daily work in our mines and factories, on our railroads, in our offices and ports of trade, on our farms and on the sea, is the underlying necessity of all prosperity. There can be nothing wholesome unless their life is wholesome; there can be no contentment unless they are contented. Their physical welfare affects the soundness of the whole nation," and in 1870 Florence Nightingale wrote: " District nursing is desirable if from a merely economic point of view. It often prevents whole families sinking into poverty and vice, the consequences of which take vengeance on society."

As never before, the Community Nurse finds here place in the economy of all public health propaganda, because, as has been previously said, both scientific knowledge and laws for the enforcement of its benefits must be patiently and painstakingly interpreted to patients and families individually and it is given to the visiting nurse to be that interpreter and follow-up agent.

We believe the time is not far distant when the public health nurse will be generally regarded as indispensable a community agent as is the public school teacher.

THE FORM OF THE REFLEXES IN CHOREA—TECHNIQUE OF ELICITATION—STUDIES IN NEUROLOGICAL TECHNIQUE NO. 4.*

By WALTER B. SWIFT, M. D.,

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The nature of the characteristic reflex in chorea is such as to demand a special method of elicitation. This method may perhaps be better described as a series of special precautions, insuring the certain isolation and display of the reflex which is truly typical of chorea itself. Obviously, failure so to isolate and display often means failure to find it. The method, which I desire to present in detail, will show itself more logically if I describe briefly the way in which choreic reflexes usually appear.

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* Studies in Neurological Technique:

No. 1. The Points in Jendrassik's Method of Eliciting the Patellar Reflex. *The Alienist and Neurologist,* August, 1913.

No. 2. Indication and Method for use of the Electrical Re-enforcement for the Elicitation of Absent Reflexes. *Rev. Neurology and Psychiatry,* December, 1914.

No. 3. The Voice Sign in Chorea—Technique of Elicitation. *Am. Journal Diseases of Children,* February, 1915.

The modified knee-jerk was reported by Shaw in 1897. (1) His account was accurate so far as it went, but because it was limited to the knee-jerk alone, it requires amplification. I therefore made the modified reflex a matter of research while on duty as an assistant in the Neurological Department in the Boston City Hospital, and prepared a report of my findings under the heading "The Form of the Reflexes in Chorea." (2) I showed that any normal reflex might be modified by a choreic contraction, and that therefore observation should not be limited to the knee-jerk alone, but should cover all reflexes modified by muscular contractions. I finally decided to describe the modified reflex of chorea as the "jerk-flop-wabble-form."

METHOD OF ELICITATION.

It is not enough, however, to know that the reflex is modified. The choreic form of reflex must be elicited with certainty. Here the method becomes of first importance. Four considerations, of the nature of precautions, determine it. *The first* is the irregularity of choreic muscular contractions. This, as I have shown in another paper (3), affects the reading of the voice sign in chorea. That is to say, the voice sign does not occur at every trial, but may often be elicited only by several trials, sometimes, though not usually, by as many as ten. The same is true of the respiratory sign of Graves (4). He does not assert that a respiratory clog occurs at every breath, but that often it may be elicited only after several tests. Again, the modified knee-jerk is by no means constant. The reason, as I have already stated, is in all cases the same; choreic muscular contractions do not accompany every reflex act in chorea.

The second determining consideration is the relative severity of the disease. If the case is a very mild one, the choreic contractions may be so weak as to interfere in no visible way with the actions of the reflexes. If the case is moderately severe the interference with the reflexes may occur oftener, perhaps every five or ten times; if the case is so serious as to show pretty constant choreic contractions the consequent modifications may appear at nearly every trial. Lastly, the severest bedridden cases, with persistent and constant spasticity and contraction, sometimes show no typically choreic reflexes at all.

The third consideration is the desirability of choosing those reflexes where there is the longest excursion in the motor response. The knee-jerk and triceps reflexes are of this sort. Clearly the longer the excursion, the more time there is for the occurrence of a choreic contraction. It is entirely reasonable to suppose a case in which the choreic modification might show itself once in five times if the knee-jerk reflex were tried; and only once in fifty, if the plantar. The knee-jerk and triceps are then the best reflexes for testing in chorea.

As I said in the beginning the elicitation of the reflex demands no special method. The usual easy tap on the tendon is satisfactory, if the precautions which I have outlined are observed. The trial should be repeated frequently and the reflex watched carefully so as to catch any modification due to a choreic contraction. I should advise a few seconds of rest between successive tests, so that the number of trials may not tire the patient. Often of course the choreic form shows on the first test, but rarely as many as twenty-five trials are necessary.

In making this test our *fourth* consideration is often a great help. It is known (5) that choreic contractions increase in frequency with an effort to control them. It naturally follows therefore that this effort should be made immediately before the test is tried. When as usual we tap the patellar tendon we divert the attention to more easily elicit the knee jerk, so here in chorea our every test should be preceded by a request to "Hold still." Such instructions should diminish the number of needed trials one half.

SUMMARY.

Let me recapitulate. The form of the reflex in chorea calls for four precautions in elicitation.

A. The relation of the reflex to the choreic contraction demands a *number of trials*.

B. The less frequency found in the milder forms demands that *in mild cases more trials* are necessary, and in severe cases less trials,—usually ten trials, rarely twenty-five or fifty.

C. As a choreic contraction has more time to occur in a reflex describing a large arc, choose reflexes with long pendulums, as the *knee jerk and triceps.*

D. As choreic contractions increase their frequency with efforts to control them, *precede each test* with the instruction to " Hold still."

In a word, make numerous trials, the more the milder the case, on reflexes with long swings—knee jerk and triceps—and precede each test with the order to " Hold still." Then watch for the form of the reflex response, which a choreic contraction may turn into a jerk, a flop, or a wabble.

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Editorial

> The Rev. J. Williams, in his interesting work (*Narrative of Missionary Enterprise*), says, that the first intercourse between natives and Europeans, "is invariably attended with the introduction of fever, dysentery, or some other disease, which carries off numbers of the people." Again he affirms, "It is certainly a fact, which cannot be controverted, that most of the diseases which have raged in the islands during my residence there, have been introduced by ships; and what renders this fact remarkable is, that there might be no appearance of disease among the crew of the ship which conveyed this destructive importation." This statement is not quite so extraordinary as it at first appears; for several cases are on record of the most malignant fevers having broken out, although the parties themselves, who were the cause, were not affected. In the early part of the reign of George III., a prisoner who had been confined in a dungeon, was taken in a coach with four constables before a magistrate; and, although the man himself was not ill, the four constables died from a short putrid fever; but the contagion extended to no others. From these facts it would almost appear as if the effluvium of one set of men shut up for some time together was poisonous when inhaled by others; and possibly more so, if the men be of different races. Mysterious as this circumstance appears to be, it is not more surprising than that the body of one's fellow creature, directly after death, and before putrefaction has commenced, should often be of so deleterious a quality, that the mere puncture from an instrument used in its dissection, should prove fatal.
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> ***The Voyage of the Beagle.*** CHARLES DARWIN

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Public Health and the Curriculum.

The evolution of the science of public health has commanded steadily increasing recognition, this department of medicine having reached a degree of importance to make demands upon the curriculum of any accredited medical school. As of many other departments of instruction which a few years ago, were treated casually in a few incidental lectures to students, special knowledge of the prophylaxis of disease has grown to be one of the required accomplishments of the well-trained physician. Indeed, it is a question whether in the mind of the laity questions of prevention are not more insistent than those of treatment, and coincidently, with the rise of sanitation, the methods of treatment in vogue a few years ago. especially those of pharmacological basis, have grown less popular. This is not surprising, for in addition to the personal benefit arising from prevention of disease, the social or economic phase of the problem justifies the exercise of a governmental function. The term "public health," as now used, includes all efforts made for the prevention or cure of disease as it affects the community, and, in some relations, the proper administration of health laws becomes a matter of police regulation.

Problems of quarantine and of the laws regulating it have become so insistent as to reach out and affect practically all human activities. The earlier public health service, limited to the prevention of epidemics and the isolation of communicable diseases, has given way to a broader conception, involving inquiry into all of the etiological factors of disease, and to any dangers from habit or custom which might result in disaster, as neglect of proper food and water supplies; imperfect disposal of sewage. or indifferent protection against carriers of contagion. It is necessary that the health officer of to-day should have technical knowledge of all the problems arising from these common sources, and should clearly understand not only methods of inspection, and of statistical inquiry, as they arise in communities, schools, factories, institutions, wherever numbers of people are congregated, or even in private houses, but also should be fortified in this knowledge by acquaintance with laboratory methods of examination.

This expansion of the field of public health and closely related subjects calls for the development of newer methods and courses of instruction in all medical schools. Indirectly, through the medical school, the vague theories and hypotheses of the public must be guided into an intelligent appreciation of the value of united effort. that legislators may be sustained in the enactment of adequate and reasonable laws and in necessary reforms. Health officers must be trained so that these laws may be properly administered. For the undergraduate medical student instruction must be provided that he may be equipped to meet the increasing obligation on assuming the duties of practice.

Though the larger cities are able to secure the services of experts, in smaller communities the protection of the public health must remain one of the many functions of the general practitioner, and preparation is an essential part of his education.

A few of the larger medical schools have arranged, in some instances in co-operation with the academic departments of universities and scientific schools, more extended courses in public health, including original investigation, and, in recognition of this special study grant a degree of doctor of public health. For the adequate administration of the public health code it would seem desirable in the future that many of the positions in public health service might be filled by health officers who have had the training which this degree signifies. It is evident, however, that such officials can not be available for a considerable time. This want may now be met in part by supplementary courses arranged to acquaint the present health officers in current methods. It is not expected that they may acquire the details of the numerous technical procedures, but there will follow greater realization of the value of these methods, and greater familiarity with their application. The Public Health Council of the State of New York has recommended that medical colleges in the State introduce a course in sanitary science leading to this degree, and suggests that ultimately such qualification be required of all health officers. This is manifestly an ideal which may be realized in the future, and for the present, is modified by a suggestion by the Council looking to the introduction in medical schools of two alternative courses.

These courses are, first, a six weeks' course with residence, in intensive study of various public health problems, including demonstrations and field and laboratory work; and, second, a so-called extension course, including about three hundred hours of reading, a written examination and attendance during the final week. The latter scheme is manifestly a course by correspondence, and is admittedly a makeshift. There is no objection to the reading by a health officer of three hundred or any number of hours, but the recognition of a "correspondence course" by a medical school of standing is of questionable propriety.

The first method of instruction necessitates attendance upon a regular course in a medical school, and has been adopted by the Albany Medical College. It will be put in operation during the present session. It has been made possible by the co-operation of the State departments of Education, of Health, of Agriculture, of Labor, the city Department of Health, the Albany Law School and others of prominence in the public health and related fields. For the fourth year class the course of lectures forms an integral part of the instruction. The hour for these lectures has been placed at half after four that others than students may attend. It is expected that physicians of Albany and vicinity, and other professional and business men and women will find the opportunity of advantage in promoting knowledge upon questions of such large public interest.

This course of lectures for the senior student is supplemented, or anticipated by systematic work arranged for the second year class. This follows the study in pathology and bacteriology to be given by the so-called "Concentration System," is arranged in the curriculum for the month of January, and comprehends general laboratory instruction in the examination of water, milk; and in sanitary surveys. This course is under the immediate charge of Dr. W. G. Smillie, instructor in the department of preventive medicine in the Harvard Medical School. The instruction includes not only the sanitary survey of a given district by groups of students under direction, but an insight into the practical work of the State laboratory in the production of antitoxine and vaccine; also, of the city filtration plant for the purification of the drinking water of Albany, municipal methods of inspection, collection of samples of milk, and suppression of nuisances. The officers of the health department of the city are to co-operate in this important system.

The Albany Medical College offers an intensive course for health officers during the entire day, 9 A. M. to 6 P. M., in the month of January, 1916. This course will combine both field and laboratory work. Each physician will make a sanitary survey of a given district and have instruction in methods and practical experience in making actual bacteriological and chemical examinations of milk, air, water. He will also have practical demonstrations in the conduct of the city health department—explanation of the records, milk inspection, suppression of nuisances, and in the State health laboratory the preparation of antitoxin, vaccine; in special plants, demonstrations in methods of water filtration and sewage disposal.

In order that health officers may profit by this course such as given to the students of the Albany Medical College, it will be necessary for them to take a preliminary intensive two weeks' course from 9 A. M. to 6 P. M. in elementary bacteriological and chemical technique. The special preliminary two weeks' course may be arranged to be taken at the convenience of health officers between October 1 and December 25, 1915. This course, however, will not be given unless at least four health officers signify their intention to attend. No health officer is eligible to the course in January who has not taken the preliminary course in technique.

Special attention will be given to such practical problems as are apt to occur in the daily work of a health officer.

A certificate will be given to those who take the entire six weeks' course and do satisfactory work. This course is recommended by the State Department of Health and for it uniform fees are charged by the various medical schools offering such a course in public health.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.
ABSTRACT OF VITAL STATISTICS, AUGUST, 1915.
COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

Deaths.

Consumption	18
Typhoid fever	2
Scarlet fever	0
Measles	0
Whooping cough	5
Diphtheria and croup	2
Grippe	0
Diarrheal diseases	17
Pneumonia	5
Broncho-pneumonia	4
Bright's disease	11
Apoplexy	6

Cancer	12
Accidents and violence	4
Deaths under one year	36
Deaths over seventy years	18
Total deaths	165
Death rate	17.66
Death rate less non-residents	13.91

Deaths in Institutions.	Non-Resident	Residenst
Albany County Hospital	2	1
St. Peter's Hospital	2	2
St. Margaret's House	0	3
Maternity Hospital	3	12
Public places	1	1
Tuberculosis Camp	4	5
Albany Hospital	13	16
Homeopathic Hospital	7	7
Hospital for Incurables	1	2
Little Sisters of the Poor	1	1
Births	197	
Still births	11	

Tuberculosis.

Bender Laboratory Report on Tuberculosis.

Living cases on record August 1, 1915		425
Cases reported:		
By card	22	
Dead cases by certificate	7	
		29
Total		454
Dead cases previously reported	11	
Dead cases not previously reported	7	
Died out of town	1	
Removed	3	
		22
Living cases on record September 1, 1915		432
Total tuberculosis death certificates filed during August		18
Non-resident deaths:		
Albany Hospital	1	
Albany Hospital Camp	3	
Homeopathic Hospital	1	
St. Margaret's House	1	
		6
Resident deaths		12

Report of Visiting Tuberculosis Nurse.

Old cases	3
New cases	44
Returned from hospitals	8
Total	55

Disposition of cases:

Died	4
Sent to hospitals	25
To general tuberculosis nurse	18
Discharged	1
Lost track of	1
Left town	1
Remaining under treatment	5
Total	55

Visits made	63
Visits made, old cases	323
Calls made at Board of Health	28

BUREAU OF COMMUNICABLE DISEASE.

Cases Reported.

Typhoid fever	9
Scarlet fever	8
Diphtheria and croup	5
Chickenpox	0
Measles	8
Whooping-cough	23
Tuberculosis	29
Epidemic cerebro-spinal meningitis	1
Total	83

Number of days quarantine for diphtheria:
Longest...... 15 Shortest...... 15 Average...... 15
Number of days quarantine for scarlet fever:
Longest...... 32 Shortest...... 31 Average...... 31¼
Fumigations:
Houses.................. 30 Rooms.................. 195

Milk bottles disinfected	35
Cases of diphtheria reported	5
Cases of diphtheria, antitoxin used	4
Deaths after use of antitoxin	2

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria.

Initial positive	12
Initial negative	134
Release positive	5
Release negative	42
Total	193

Test of Sputum for Tuberculosis.

Positive	9
Negative	23
Total	32

Widal Tests.

Positive	8
Negative	35
Suspicious	2
Total	45
Milk analyses	70
Wassermann tests	1

BUREAU OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections	196
Old houses	69
New houses	127
Iron drains	59
Connection street sewers	19
Tile drains	21
Cellar drainers	0
Urinals	36
Cesspools	66
Wash basins	125
Sinks	58
Bath tubs	53
Washtrays	44
Tank closets	158
Slop hoppers	1
Stable stands	8
Shower baths	2
Permits issued	148
Plumbing	114
Building	34
Plans submitted	37

Old buildings	9
New buildings	28
Houses tested	43
Smoke	0
Blue or red	2
Water test	41
Houses examined	44
Re-examined	68
Valid	23
Without cause	21

Bureau of Markets and Milk.

Public market inspections	19
Market inspections	79
Fish market inspections	7
Fish peddler inspections	2
Packing house inspections	2
Rendering plant inspections	1
Slaughter house inspections	1
Milk depots inspected	14
Milk houses inspected	29
Milk cans inspected	165
Milk cans condemned	4
Dairies inspected	5
Dairies reinspected	24
Cows examined	48
Lactometer readings	132
Temperature tests	132
Fat tests	97
Bacterial examinations	93
Sediment tests	84
Dogs examined for rabies	1

Miscellaneous.

Work certificates issued to children	9
Number of complaints of nuisances	79
Privy vaults	3
Closets	4
Plumbing	24
Other miscellaneous complaints	48
Cases assigned to health physicians	61
Calls made	102
Number of dead animals removed	452

Medical News

Edited by Arthur J. Bedell, M. D.

MEDICAL SOCIETY OF THE COUNTY OF SCHENECTADY.—The regular meeting of the Medical Society of the County of Schenectady was held in the rooms of the Society in the New County Building, Tuesday, September 14th, at 8.30 P. M. Dr. Thomas S. Southworth, of New York City, read a paper on "The Avoidance of Unnecessary Weaning."

THIRD DISTRICT BRANCH, MEDICAL SOCIETY OF THE STATE OF NEW YORK.—The ninth annual meeting of the Third District Branch of the Medical Society of the State of New York was held Tuesday, September 28, 1915, at the Elks Club, Hudson, N. Y.

As guests of the Medical Society of the County of Columbia, the members enjoyed a clam bake at 12.30 P. M. at the Elks Club.

The following papers were read at the afternoon session: President's Address, Dr. Alvah H. Traver, Albany; Address, Dr. W. Stanton Gleason, President of the Medical Society of the State of New York, Newburgh; "Cocaine and Morphine Law," Dr. Linsley R. Williams, Deputy Commissioner of Health, Albany; "Carcinoma," Dr. Richard Derby, Chief Surgical Clinic, St. Luke's Hospital, New York; "The Intoxications," Dr. Christopher J. Patterson, Troy; "Papilloma of the Trachea from the General Practitioner's Standpoint," Dr. Frank Keator, Kingston; "Neurasthenia," Dr. Louis Van Hoesen, Hudson.

ALBANY HOSPITAL NURSE TRAINING SCHOOL.—The graduating exercises and reception of the Class of 1915 of the Albany Hospital Nurse Training School were held at the Nurses' Home, Albany Hospital, Thursday, September 16th, at three o'clock.

ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES.—The twenty-fourth annual session of the Association of Military Surgeons of the United States was held in Washington on September 13th to 15th.

MEETING OF THE AMERICAN SOCIAL HYGIENE ASSOCIATION.—The annual meeting of the American Social Hygiene Association will be held at Boston, October 8, 1915.

WARNING AGAINST CANNING COMPOUNDS.—The United States Department of Agriculture has issued a warning against the use of salicylic and boric acids as preservatives in the canning of fruits. It is said that these drugs are sold under various trade names with instructions to put a teaspoonful in the top of the fruit jar before closing it. While these drugs may prevent decay for awhile, their use may be accompanied by disturbances of health, chiefly derangement of the digestion. The use of such preservatives in fruit canned and sold in interstate commerce is prohibited by the Food and Drugs Act, and various States have regulations concerning their use. These laws do not cover the use of canning compounds in fruit for domestic use put up in the home. It is on this account that the warning is issued. It is pointed out that fruits and vegetables can be kept indefinitely if they are sterilized by heat and properly sealed. The department calls attention to the bulletins issued on the canning and preserving of fruits and vegetables which may be procured on application to the department, Washington, D. C.

Constitutional Convention Passes Welfare Bills.—After a very bitter fight the constitutional convention, on September 3d, adopted the proposal giving the Legislature power to regulate manufacturing in tenements and also the proposal enabling the law-making body to bring occupational diseases within the scope of the workmen's compensation law. The vote on the first proposal stood 97 to 46 and on the second 125 to 17.

State to Keep Hospital Commission.—The proposed amendment continuing the present State Hospital Commission as a constitutional body in control of the administrative and financial operations of the State hospitals for the insane which has been before the committee on charities of the Constitutional Convention, has been reported favorably. The committee is opposed to proposals for a board of control for all the institutions of the State. In his report to the convention, Chairman Wadsworth pointed out that the hospital commission looks after 33,000 patients in fourteen hospitals with 6,000 employees and 200 medical officers at a cost of $8,500,000 a year. It is stated that this is the largest undertaking of a medical and curative nature maintained by any government in the world and that at the present rate of increase when the next Constitutional Convention meets the number of insane in the State will have reached 60,000 and the number of employees 10,000.

Labor Unions Co-operating with Public Health Campaign.—Last April, Health Commissioner Herman M. Biggs sent out a letter to some of the principal labor unions of the State offering the services of the department lecturers to speak before labor union meetings on health topics, particularly tuberculosis, and asking the unions to co-operate by appointing health committees to aid in the general and local health campaign. A special circular was prepared dealing with the problems of industrial tuberculosis, and the weekly Health Hints service of the department has been offered to the principal labor papers of the State. These steps have been met with a gratifying response from the leaders of labor unions and a considerable number of meetings have been arranged. A number of the labor union papers have expressed their interest in the Health Hints service and will use them when possible. The Joint Board of Sanitary Control of New York City has ordered 10,000 copies of the special circular on industrial tuberculosis for use among the members of the cloak, suit, skirt, dress and waist industries.

INTERNATIONAL CONFERENCE ON RACE BETTERMENT.—The Second International Congress on Race Betterment, held at San Francisco, Cal., August 4th to 8th, was attended by a large number of men and women of scientific achievement. The Conference discussed race decadence, the possibilities of race improvement and the agencies of race betterment.

Luther Burbank discussed "Evolution and Variation with the Fundamental Significance of Sex." Mr. Burbank said: "Abundant, well-balanced nourishment and thorough culture of plants or animals will always produce good results in holding any species or variety up to its best hereditary possibilities, beyond which it cannot carry them, and lacking which, maximum development can never be realized. But a sharp line must always be drawn between the transient results, temporarily attained through favorable environment and the permanent results of selection of the best individuals for continuing the race. Only by constant selection of the best can any race ever be improved."

Paul B. Popence, in discussing "The Natural Selection of Man," declared: "There are only two ways to improve the germinal character of the race, to better it in a fundamental and enduring manner. One is to kill off the weaklings born in each generation. That is nature's way, the old method of natural selection which we are all agreed must be supplanted. When we abandon that, we have but one conceivable alternative and that is to adopt some means by which fewer weaklings will be born in each generation. The only hope for permanent race betterment under social control is to substitute a selective birth-rate for nature's death-rate. That means eugenics."

Dr. J. H. Kellogg proposed that the Conference institute a eugenics register which would undertake to register two classes of people: "First, those who on examination in relation to personal characteristics and family pedigree, are found to measure up to eugenics standards. Second, the children born of parents whose pedigree and physical characteristics conform to the required standards. Such a registry would be the beginning of a new and glorified human race which some time, far down in the future will have so mastered the forces of nature that disease and degeneracy will have been eliminated. Hospitals and prisons will be no longer needed and the golden age will have been restored as the crowning result of human achievement and obedience to biologic laws."

Among the other speakers were Dr. David Starr Jordan, Dr. Ernest B. Hoag, Edgar L. Hewett, Prof. Irving Fischer and many others of equal prominence in sociological and scientific circles.

The Conference was concluded with a Morality Masque, in which two hundred students of the University of California took part. This masque was a dramatic arrangement of disease and war.

MEETING OF AMERICAN PUBLIC HEALTH ASSOCIATION.—The forty-third annual meeting of the American Public Health Association and the fifteenth annual conference of the Sanitary Officers of the State of New York met in Rochester, N. Y., September 6th. Over 1,800 health officers and sanitary experts were present. At the opening session an address was delivered by Major-General Gorgas, who described the work in the Canal Zone. An address was also delivered by Dr. O. M. Leiser, of New York, on the "patent medicine" evil. Dr. Herman M. Biggs, State Commissioner of Health, presided. At the first day session, September 7th, a symposium on the subject of pure milk was held with the following speakers: Dr. W. H. Park, New York; Lucius P. Brown, New York; Dr. Linsly R. Williams, New York; Prof. H. W. Conn, Wesleyan University; Drs. H. D. Pease and C. E. North, New York. There were also reports on cold storage and morbidity statistics. At the second open meeting Governor Whitman, of New York, and Mayor Edgerton, of Rochester, spoke. Dr. John F. Anderson, United States Public Health Service of Washington, D. C., was elected president.

ELECTRO-THERAPEUTISTS MEET.—The twenty-fifth annual meeting of the American Electro-Therapeutic Association was held in Atlantic City, N. J., September 14th to 16th.

AMERICAN ASSOCIATION FOR STUDY AND PREVENTION OF INFANT MORTALITY.—The sixth annual meeting of the American Association for Study and Prevention of Infant Mortality will be held in Philadelphia, November 10 to 12, 1915. The subjects to be discussed include: Eugenics, Effect of Economic Standing of the Family on Infant Mortality; Infant Welfare Nursing in Small Cities, Towns and Rural Districts; Institutional Mortality, Midwifery Conditions; Treatment and Prevention of Respiratory Diseases.

The session on Economic Aspects of Infant Welfare will be a joint one with the Philadelphia County Medical Society and will be held at the College of Physicians. All other sessions will take place at the Bellevue-Stratford Hotel.

EXAMINATION OF CANDIDATES FOR ASSISTANT SURGEON.—UNITED STATES PUBLIC HEALTH SERVICE.—Boards will be convened at the Bureau of Public Health Service, 3 "B" Street, S. E., Washington, D. C., and at the Marine Hospitals of Boston, Mass., New York, N. Y., Chicago, Ill., St. Louis, Mo., Louisville, Ky., New Orleans, La., and San Francisco, Cal., on Monday, November 1, 1915, at 10 o'clock A. M., for the purpose of examining candidates for admission to the grade of Assistant Surgeon in the Public Health Service.

Candidates must be between 23 and 32 years of age, graduates of a reputable medical college, and must furnish testimonials from two responsible persons as to their professional and moral character. Credit will be givin in the examination for service in hospitals for the insane or experience in the detection of mental diseases. Candidates must have had one year's hospital experience or two years' professional work.

Candidates must be not less than 5 feet, 4 inches, nor more than 6 feet, 2 inches, in height, with relatively corresponding weights.

The following is the order of examination: 1, Physical; 2, Oral; 3, Written; 4, Clinical.

Candidates are required to certify that they believe themselves free from any ailment which would disqualify them for service in any climate.

Examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercise covers the various branches of medicine, surgery, and hygiene.

The oral examination includes subjects of preliminary education, history, literature, and natural sciences.

The clinical examination is conducted at a hospital.

The examination usually covers a period of about ten days.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order. They will receive early appointments.

After four years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon. Passed Assistant Surgeons after twelve years' service are entitled to examination for promotion to the grade of Surgeon.

Assistant surgeons receive $2,000, passed assistant surgeons $2,400, surgeons $3,000, senior surgeons $3,500, and assistant surgeon-generals $4,000 a year. When quarters are not provided, commutation at the rate of $30, $40, and $50 a month, according to the grade, is allowed.

All grades receive longevity pay, 10 per cent. in addition to the regular salary for every five years up to 40 per cent. after twenty years' service.

The tenure of office is permanent. Officers traveling under orders are allowed actual expenses.

For invitation to appear before the board of examiners, address " Surgeon-General, Public Health Service, Washington, D. C."

PERSONALS.—Dr. ROBERT B. LAMB (A. M. C. '91) and Dr. CLARENCE J. SLOCUM (A. M. C. '97), have established a private hospital, " Craig House," for mental and nervous cases at Beacon, N. Y. Dr. Lamb was for twenty years in the State service at Dannemora and Matteawan and Dr. Slocum, after service in the Hudson River State Hospital, has been resident physician at Dr. Carlos MacDonald's house at Central Valley for the last twelve years.

—Dr. CHARLES E. MAXWELL (A. M. C. '11), is practicing at Portlandville, N. Y.

—Dr. ARTHUR H. STEIN (A. M. C. '12), has opened an office at 259 State St., Albany, N. Y.

—Dr. DAVID W. BEARD (A. M. C. '14), after a year as resident physician in the Albany Hospital, has opened an office at Cobleskill, N. Y.

MARRIED.—Dr. ELWIN W. HANNOCK (A. M. C. '10), of Albany, N. Y., and Miss M. Ruth Stafford, of Plattsburg, N. Y., were married September 4, 1915, at Plattsburg.

—Dr. Howard C. Murray (A. M. C. '10), of Herkimer, N. Y., and Miss Margaret E. Grosvenor, also of Herkimer, were married June 15, 1915, at Herkimer, where Dr. Murray has been in practice for three years.

—Dr. Hugh Gregory (A. M. C. '13), and Miss Ethel A. Retersdorf, of Utica, were married at Utica, September 16, 1915. Dr. and Mrs. Gregory will live in Ogdensburg, where Dr. Gregory is connected with the State Hospital.

—Dr. Harry S. Howard (A. M. C. '13), of Albany, N. Y., and Miss Anna M. Jones, of Granville, N. Y., were married September 15, 1915, at Granville. Dr. and Mrs. Howard will live at 42 Eagle St., Albany.

—Dr. Elmer H. Ormsby (A. M. C. '13), of Amsterdam, N. Y., and Miss Muriel E. Blackwood, of Huntington, Canada, were married September 15, 1915, at Huntington. Dr. Ormsby recently started practice in Amsterdam.

Died.—Dr. Ianthus G. Johnson (A. M. C. '55), died at Greenfield Centre, N. Y., May 31, 1915.

—Dr. John Milton Shields (A. M. C. '68), died May 23, 1915, aged 74 years, at Jemez Springs, New Mexico.

In Memoriam

Clinton Bradford Herrick, M. D.

Clinton Bradford Herrick was born in West Troy, N. Y. (now Watervliet), August 27, 1859. He received his early education in the public schools of his native town and his medical education at the Albany Medical College, graduating in the Class of 1880 at the age of twenty-one. He started to practice at Troy, N. Y., and very early limited himself to general surgery. He spent much time in post-graduate study and made three trips to Vienna, Austria, for that purpose. The doctor was much interested in surgery as employed in railway injuries, and from his experience as surgeon to the steam railways entering Troy, he wrote a book entitled Railway Surgery, probably the only one written devoted to this subject only. He contributed freely to the medical literature, and for three years was prize essayist of the State Medical Society.

For over thirty years Dr. Herrick was an attending surgeon at the Troy Hospital and House of Good Shepherd, also consulting surgeon at the Leonard Hospital. He was at one time clinical professor of surgery at Albany Medical College, giving lectures in railway surgery and holding a weekly surgical clinic at the Troy Hospital.

The doctor was an enthusiastic yachtsman and served as commodore of the Troy Yacht Club, and he was instrumental in the formation and was at the head of the Volunteer Life Saving Corps along the upper Hudson.

Some eight years ago he became interested in fruit growing and purchased an orange grove at Sharges, Fla. Here he spent the winter of each year.

Dr. Herrick was a member of the Sons of the War of 1812 and served as president of that Society. He was appointed by the Governor of New York to represent the State on the Commission that built the Perry Memorial at Put-in Bay, Ohio, in 1913 and had charge of the Celebration of the War of 1812 on Lake Erie during that year.

He was an active member of the Rensselaer County Medical Society and New York State Medical Society, also the New York and New England Association of Railway Surgeons, being an ex-president of the last named. He was at one time a member of the American Medical Association.

Five years ago, because of failing health, he retired from practice and devoted his time to his orange grove in Florida. In the spring of 1913, while traveling in Georgia, he was compelled by a hemorrhage of the bladder to seek relief and was operated on at Atlanta and this disclosed a tumor of the bladder. He subsequently sought relief at Baltimore in the spring and fall of 1914, but without result. He died of carcinoma of the bladder, March 23, 1915, at his home in Florida. His remains were brought north and buried in the Rural Cemetery, Albany, N. Y.

J. H. REID.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

Route, Rhyme and Remedy. A Collection of His Miscellaneous Prose and Poetry. By CHARLES A. INGRAHAM, M. D., author of "Songs of All Sorts," "Steps up Life's Ladder," "Fact, Fiction and Reflection," etc. Let not the Law of thy Country be the non-ultra of thy Honesty; nor think that always good enough which the Law will make good. Narrow not the Law of Charity, Equity, Mercy. Join Gospel Righteousness with Legal Right. Be not a mere Gamaliel of Faith, but let the Sermon on the Mount be thy Targum unto the Law of Sinah.—*Sir Thomas Brown.* Press of Frank H. Evory & Co., Albany, N. Y., 1915.

The allurement of alliteration afflicts many an author and the ablest yield. The letter "R" is the favorite, perhaps from early impressions and memories of the cardinal principles of education. We recall one enthusiastic writer who launched a book, and then suppressed it, under the enigmatic title "The Three R's, by one who has been R'd." How a man feels who has been "R'd" is a problem we are unable to solve, but if the phrase be applicable to the reader of Dr. Ingraham's three "R's" the effect may be described as decidedly pleasant. The ANNALS has had occasion before to refer to Dr. Ingraham's literary genius, and is grateful for another opportunity to enjoy the products of his pen and perspicacity. The latter term is employed as representing the revelation of his close scrutiny of the experiences of life and of his philosophical comments. His journeys to various places of interest, historical and personal, are described with accuracy, and are fortified with deep knowledge of the significance of events and of character. There is keen sensitiveness to the beauties of the Yellowstone Park, Lake George and its environment, to the grandeur of the Rockies; and the sketches of Mount Vernon, the Field of Gettysburg, and Kingston, are scrupulously correct in their perspective of history. Opportunity for moral reflection is not lost in the essays on Independence Day, Salt Lake City, Famous Women, Direct Nominations, Militarism, Humanism and Emigration. The finer strain in the author's mental endowment is revealed in the poems. Interpolated are several chapters entitled "Little Helps to Health," consisting of a series of short suggestions on the emergencies of the household, and on the significance and management of minor ills—a kind of "guide to health," or "prevention of disease," carefully selected and plainly expressed.

Under its rather curious title Dr. Ingraham's volume contains much that is of value. It represents the sentiments and reflections of a physician who thinks about what he sees and possesses the ability to express his thoughts in readable language. The result is an *olla podrida* of good things, which is highly creditable to the author, and gratifying to the college of which he is a distinguished alumnus.

NEW YORK STATE MEDICAL LIBRARY.

Edited by Frances K. Ray.

Hours of Opening.—Each week day (Christmas, Thanksgiving and Fourth of July excepted) from 9 A. M. to 6 P. M. and on Tuesdays and Thursdays until 10 P. M. from October to May inclusive.

Loans.—Books may be borrowed by any licensed physician in the State, by full-time instructors on the faculty of any medical college, members of the house staff of any hospital, registered and certified nurses, or any one engaged in medical work or pathological research who offers suitable references and credentials. The borrower shall pay return postage on books loaned outside of Albany, use such care in packing as to guard against injury in transportation, and pay for books lost or damaged.

Length of Loan.—The period of loan is two weeks, for periodicals; four weeks for other works.

Physicians coming to the library for special research will find it to their advantage to notify the librarian in advance, as to the books or subjects desired and the date of the prospective visit.

Library of Surgeon-General's Office, U. S. A.—Physicians wishing books from this national medical library may obtain them for two weeks through this library by paying express charges both ways.

Gifts.—Gifts of books, periodicals or reprints are earnestly solicited. Even single volumes or odd numbers of periodicals of little value to the owner may help to complete valuable sets.

Since its destruction by fire in 1911 the Medical Library has acquired by gift and purchase approximately 19,450 bound volumes, many broken periodical volumes and several thousand pamphlets; and receives currently about 500 serials. A list of over 200 periodical sets which have been completed to date is now in press and will soon be ready for distribution.

The constantly increasing use of the library attests its value to the community at large as well as to the medical profession.

To the many physicians of the state who have never availed themselves of its privileges the Library extends a cordial invitation to draw upon its resources.

The following is a partial list of recent accessions:

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The Osteogenic Power of Periosteum: with a Note on Bone Transplantation. An Experimental Study.

John Staige Davis and John A. Hunnicutt. *Bulletin of The Johns Hopkins Hospital, March,* 1915. *Vol. XXVI, No.* 289, *page* 69.

The purpose of this study has been to determine the accuracy of Macewen's observations and experiments which seem to show that periosteum was not a bone-producing tissue, but that its function was simply that of a limiting membrane. The authors state that while Macewen's views were not in accordance with the principles accepted for many years, they approached the subject with as far as possible unbiased minds in order to clear up the matter for their own satisfaction. They have repeated during the past two years many of Macewen's experiments, and have also carried out a number of their own. One hundred and sixty-seven experiments were done on 50 dogs and 17 rabbits. The ordinary run of laboratory animals were used, although as far as possible young animals were selected. Ether anesthesia was used in each experiment.

From their work the authors draw the following conclusions:

Free periosteal transplants did not produce bone in the large majority of experiments, even though osteoblasts were adherent to the transplants.

Pedunculated flaps of periosteum did not produce new bone.

Free periosteal transplants and pedunculated periosteal flaps, with bone shavings attached, produced bone in each experiment. From this it may be surmised that bone particles had been accidentally transplanted in those experiments in which bone was found after the transplantation of free periosteum.

The removal of periosteum had little, if any, effect on the nutrition of a bone. The surface from which the periosteum was removed showed very little overgrowth of bone, unless there had been considerable irritation of that surface, either by trauma or by infection. The area from which the periosteum had been taken was covered with a thin, very adherent fibrous membrane; or the muscle tissue was adherent to the denuded area.

Absorption occurred when a silver ring was snugly applied around a bone over the periosteum, and also at times when it was applied around denuded bone. There was no new bone formed from either the periosteum or bone, when a silver ring was placed around a bone beneath the periosteum.

Both auto- and iso-bone, without periosteum, were effective in repairing skull defects.

Auto- and iso-bone, without periosteum, when transplanted into the periosteal tube after subperiosteal resection of a rib, caused stimulation of bone growth from the periosteum and also from the rib ends.

Transplants, covered with periosteum and also foreign bodies, stimulated bone-growth only from the rib ends.

Transplants of the same size in a periosteal tube, after subperiosteal resection, under exactly the same conditions, acted quite differently.

After subperiosteal resection of a portion of a bone, the growth of bone in repairing the defect was from the bone stumps, the periosteum acting as a limiting membrane.

Auto-bone, both with and without periosteum, lived and was successfully transplanted to fill defects in bone. Clinically, it is advisable to transplant bone covered, in part at least, with periosteum.

Iso-bone in a bone defect acted as a scaffold for the growth of new bone from the living bone stumps, but there was ultimate absorption of the transplant.

Auto-bone, both with and without periosteum, was absorbed when transplanted into soft parts. The periosteum seemed to have some protective influence against early absorption. The fate of those transplants which had grown together and produced new bone is doubtful, but as absorption was going on, and as the tendency of free bone in the soft parts was to be absorbed, it seems probable that absorption would eventually have occurred.

The same may be said of iso-bone in soft parts, except that in no instance was any new bone formed from the transplant.

Hibernation and the Pituitary Body.

Harvey Cushing and Emil Goetsch. *The Journal of Experimental Medicine, Vol. XXII, No.* 1, *July,* 1915, *page* 25.

The purpose of this study by Cushing and Goetsch has been to point out that a seasonal wave of physiological inactivity on the part of certain of the glands of internal secretion may well account for the phenomenon of hibernation. As a result of their studies they find that a train of symptoms coupled with retardation of tissue metabolism and with inactivity of the reproductive glands, not only accompanies states of experimentally induced hypophysial deficiency, but is equally characteristic of clinical states of hypopituitarism. The more notable of these symptoms are a tendency, in the chronic cases, toward an unusual deposition of fat, a lowering of body temperature, slowing of pulse and respiration, fall in blood pressure, and oftentimes a pronounced somnolence.

These symptoms bear a marked resemblance to the physiological phenomena accompanying the state of hibernation which have heretofore been unsatisfactorily ascribed solely to extracorporeal factors, namely a seasonal deprivation of food and low temperature.

In a series of hibernating animals (woodchucks) it has been found that during the dormant period histological changes are apparent in many of the ductless glands. The most notable of these changes occur in the pituitary body as previously observed by Gemelli. The gland not only diminishes in size, but the cells of the parts anterior in some animals at least completely lose their characteristic staining reactions to acid and basic dyes. At the end of the dormant period the gland swells, and as the cells enlarge they again acquire their differential affinity for acid, basic, and neutral stains, and at the same time karyokinetic figures may appear.

On the basis of these observations the authors believe that hibernation may be ascribed to a seasonal physiological wave of pluriglandular inactivity. The essential rôle may perhaps be ascribed to the pituitary body, not only for the reason that the most striking histological changes appear in this structure, but also because deprivation of the secretion of this gland alone of the entire ductless gland series produces a group of symptoms comparable to those of hibernation.

Late Poisoning with Chloroform and Other Alkyl Halides in Relationship to the Halogen Acids Formed by Their Chemical Dissociation.

Evarts A. Graham. *The Journal of Experimental Medicine, July,* 1915. *Vol. XXII, No.* 1, *page* 48.

The author recognizes the well known fact that the prolonged administration of chloroform may be followed by certain well marked morphological changes in the tissues, most conspicuous of which are edema, fat infiltration, multiple hemorrhages, and necrosis of the central portion of the liver lobule.

In this paper the view is developed that the changes characteristic of late poisonings with the above named group, namely, edema, multiple hemorrhages, fat infiltration and necrosis are ascribable to acids and to the fact that the amount of acid formed parallels the chemical dissociability of the drug outside of the body.

Favoring the view that acid is responsible for the changes are the following observations:

1. All the characteristic features of late chloroform poisoning have been produced merely by the administration of hydrochloric acid, except, however for a different distribution of the liver necrosis.

2. The areas of central necrosis produced in the liver by the various substances under discussion give an acid reaction to neutral red.

3. Sodium carbonate in a hypertonic sodium chloride solution markedly inhibits the production of the lesions.

In favor of the view that the respective halogen acids play an important part are the following:

1. After the administration of some of these drugs there has been noted an increase of the neutral salts of the halogen acids in the urine a fact which indicates that the corresponding halogen acids must have been formed somewhere in the body.

2. The necrosis-producing powers of dichlormethane, chloroform, and tetrachlormethane parallel the amounts of hydrochloric acid which these substances theoretically can yield in their breakdown outside of the body. Likewise, the power to produce tissue changes exhibited by the ethyl compounds varies directly with the ease with which they form their respective halogen acids *in vitro*.

3. Ether and chloral hydrate which do not yield halogen acid in their breakdown in the body likewise also do not produce necrosis. They induce only edema and fat infiltration to a less marked degree.

The suggestion is made that the halogen acid (hydrochloric, hydrobromic, or hydriodic acid), directly liberated in the process of dissociation, may be the important factor which makes the tissue changes seen in poisoning with chloroform and other alkyl halides so different from those following the administration of narcotic drugs of a different type.

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In Memoriam

BIOGRAPHICAL SKETCH OF THE LATE PROFESSOR SAMUEL BALDWIN WARD, M. D., PH. D., OF ALBANY, N. Y.

By WILLIS G. TUCKER, M. D.

Those who seek an argument for human immortality are wont to allege that it is unreasonable to suppose that the spirit of man, so superior to its bodily environment and often unaffected by the limitations and imperfections of the "muddy vesture of decay" with which it is clothed, should cease to exist when the latter perishes. They point to useful lives ended by physical deterioration or untimely accident while yet the mind is vigorous and its qualities unimpaired, and urge that these high activities and productive capacities must find a scope for continued exercise and fruitful service in another sphere. Such reasoning on analysis is seen to be inconclusive, and it can never carry conviction to those who hold that no demonstrable evidence can be adduced to prove the existence of mind apart from a physical organization but, despite all this, the underlying idea, born it may be of a hope or based upon an inborn trust, recurs to those of serious mind when they consider the ending of some noble, energetic and useful life. Such a life came to its close when Dr. Ward passed from earthly service, for his intellectual powers remained unimpaired though his bodily strength failed. But if a choice could be made who would not prefer this order of dissolution? Better it is that the mind should retain its activity, though physical powers wane, than that the intellect should decay while corporeal strength survives.

Dr. Samuel Baldwin Ward was born in New York City June 8, 1842, the son of Lebbeus Baldwin and Abby Dwight (Partridge) Ward. His father, born in New Jersey in 1801, was the son of Silas Ward who married a daughter of Daniel Dod, said to have been the first maker of mathematical instruments in this country. A son of Daniel Dod's was professor of mathematics at Princeton College and the Dod family was noted for its mechanical and mathematical skill. Daniel Dod was engaged in the construction of machinery and particularly of steamboat engines when steam navigation was in its infancy, and he was carrying on this kind of work at the beginning of the last century, when Stevens, in Hoboken, was similarly engaged, and Robert Fulton was building the "Clermont" in Jersey City. Dr. Ward's father, inheriting similar tastes and skill, followed a like occupation. He was the founder of the Hammersley Forge Works at 59th street on the North River where he built engines and manufactured iron forgings, and, associated with his two brothers, built the first steamboat ever operated in Canada. Dr. Ward's inventive and mechanical skill and manual dexterity, to which later reference will be made, was therefore inherited from his father and his grandparents. Lebbeus B. Ward was a member of the Metropolitan Board of Police in the early years of its establishment; a member of the State legislature in 1851, and occupied many positions of prominence and trust. His home for many years, and at the time of Dr. Ward's birth, was a large stone mansion on the North River near his works and one of the doctor's early recollections, as he once told the writer, was seeing the first train for Albany on the Hudson River Railroad pass this house in October, 1851. Lebbeus Ward was married three times and his second wife, Abby Dwight Partridge, the daughter of a Massachusetts clergyman of Pilgrim stock, was the mother of Dr. Ward and of his younger brother Willard. He died in New York City, June 15, 1885.

Dr. Ward's birth was auspicious and his early surroundings and home training none the less fortunate, for he came of good stock and was brought up among cultured and intelligent people and in a home atmosphere which was conducive to his moral

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and mental development. As a youth he was studious, energetic and ambitious and early in life gave evidence of the possession of those qualities and virtues which later rendered him conspicuous. His early education was received in private schools and was so thorough that at the age of sixteen he was able to enter Columbia College from which institution he was graduated in 1861, standing third in his class and chosen by his fellow-students to fill various positions of honor and responsibility. He had selected medicine as a profession and, the civil war having broken out, was desirous of entering the medical service of the army. Dr. Willard Parker of the College of Physicians and Surgeons was one of the foremost surgeons of his time and under his tutelage, as a private student in his office, he began the study of medicine. He attended the course of 1861-62 at the college named, in which his preceptor was professor of surgery, and in 1862 was appointed medical cadet in the United States Army. Occupying this position he continued his study of medicine and at the same time obtained valuable surgical and administrative experience. At this time only two courses in a medical school were required prior to graduation; the army needed surgeons, and the medical colleges did all they could to facilitate the progress of their students who desired to enter the army. In 1863 he was commissioned bv President Lincoln an Acting Assistant Surgeon in the United States Army and, his hospital service being in Washington and its vicinity, he was able to attend lectures in the medical department of Georgetown University of the District of Columbia and from this college received the degree of Doctor of Medicine in 1864. The same year and in advance of his graduation he was commissioned by the President an Assistant Surgeon of United States Volunteers, and his army service afforded him unusual opportunities for acquiring a practical knowledge not only of medicine and surgery but sanitation, hospital administration and kindred subjects. At the close of the war he went abroad and pursued his studies in several schools and hospitals in England and on the Continent.

Returning to New York Dr. Ward began the practice of medicine in that city. From 1867 to 1869 he was curator of the medical museum of the College of Physicians and Surgeons, and in 1867 was appointed professor of anatomy in the Woman's

Medical College of the New York Infirmary and served as such until 1870 when he was made professor of surgery and this chair he filled until his removal from the city in 1876. From 1874 to 1876 he served as secretary of the Northwestern Medical and Surgical Society, was attending physician to the Northern Dispensary, consulting surgeon to the New York Infirmary for Women and Children, and visiting surgeon to the Presbyterian Hospital, and he was assistant surgeon of the Seventh Regiment with rank of captain from 1872 to 1876 when he removed to Albany. During this period he was a frequent contributor to the medical journals and regularly prepared abstracts of medical papers from American and foreign journals which appeared each month in the *New York Medical Journal,* attracted considerable attention, and were very useful and highly esteemed. His reputation as an expert anatomist, skillful surgeon and accomplished lecturer was now well established.

In 1876 the medical college at Albany needed a professor of surgery. For several years there had been dissension in medical circles in Albany and a considerable element in the profession was unfriendly to the management of the medical school. With the death of Dr. J. H. Armsby in 1875 the faculty was greatly weakened and its standing impaired. No surgeon in Albany or its vicinity being available a committee was appointed to visit New York and select a man to fill Armsby's place, and this committee advised with Dr. Frank Hamilton and other surgeons of prominence who unhesitatingly recommended Dr. Ward for the vacancy. Early in January, 1876, this committee conferred with the nominee and found him disposed to accept the position. The writer, though not a member of the committee, called upon him at his residence in Forty-second street to discuss the matter and thus began an acquaintance which was destined to ripen into an intimacy, fond and confidential, unshaken and uninterrupted until the bonds of esteem and affection which united them were dissolved by death. Even the trifling incidents of this visit will never be forgotten by the survivor for circumstances conspired to make the occasion important and memorable to him. The medical school with which he had been for some time connected, and of which he was an alumnus, was in a precarious condition and much depended upon the selection of the right man to fill so important a vacancy. That the appointee should possess not only ability and reputation but tact, was essential to the end that no new element of discord should be introduced into the school but rather one that might help to unite already inharmonious factions. Matters were however progressing very rapidly and greater changes were impending than the existing faculty realized. To review these in this place is unnecessary for it is ancient history, much of it unwritten, and perhaps best consigned to oblivion. Those who had part in the occurrences of this period are fast passing from the scene, and those who had knowledge of them, and remain, may find topics more agreeable and worthy of rehearsal than the medical quarrels which divided the profession of Albany for years, and conflicts—the smoke of which after all this time has not entirely cleared away. Suffice it to say that in February, 1876, a reorganization of the school was effected and a large and rather incongruous faculty came into existence. No less than three surgeons were appointed, and Dr. Ward was tendered the chair of surgical pathology and operative surgery. He came to Albany with many letters of introduction to prominent citizens, looked over the ground, and decided to accept the appointment.

Benvenuto Cellini records in his Memoirs that when a child his father showed him a salamander which as he says, came out from among the burning oak logs on the hearth and disported itself in the fire, giving him at the same moment a box on the ear that so unusual an event should be fixed in his recollection. And so, the circumstances attending his first call on Dr. Ward being unusual, and to him important, the writer recalls even the minor incidents very distinctly. The cordial greeting, agreeable manners, outspoken frankness and evident sincerity of his host were no less noticeable than were the evidences of education, culture and refinement which his conversation immediately disclosed. One had only to converse with him for a moment to be assured that he was not only responsive but courteously assertive, that he had a ready wit, and was the possessor of an active, well-stored and versatile mind. The writer recalls the colored man-servant, a West Indian, who served whisky and soda and to whom the doctor gave his orders in French. This man accompanied him when he removed to Albany and attracted some attention sitting in livery beside the doctor as he drove in a handsome top buggy with a team of horses to visit his patients. So much display was not as common in Albany then as it was in New York for physicians hereabouts had been driving in gigs not long before and seldom drove more than one horse, tying him to a tree-box when they alighted without aid from a coachman, and it was not long before the doctor dispensed with the outdoor services of this useful man.

Dr. Ward removed with his family to Albany in the spring of 1876 taking the house formerly occupied by Mr. Lansing Pruyn at 135 North Pearl street. This was a large old-fashioned brick house not particularly adapted to a doctor's uses, but a side entrance was constructed to a commodious and well-appointed office built on in the rear. Here for years he dispensed an elegant and lavish hospitality and his house was a place where his intimate friends loved to gather on Sunday evenings and at other times. Among these were Gray of Utica during the time that he was lecturing in the medical school, Perkins of Schenectady who for years while a member of the college faculty made this house his home on his regular visits to Albany, Webster the physiologist and afterwards president of Union, the elder Mosher, McKelway, then editor of the Albany *Argus*, Major, afterwards Mayor Gaus, Townsend and many others most of them now gone. He had many hobbies, as photography in which he was expert, and for several years had a rifle range in the long hall under the entrance to his office, with a miniature target of the same apparent size as a regular rifle target at standard distance. He liked outdoor sports, loved the woods, was a good shot and fisherman, and spent much time at his camp in the Adirondacks on Upper Saranac Lake and on the Saguenay in Canada. Whatever he did in these ways was done well and with keen interest and enthusiasm and these diversions brought about him a wide circle of friends interested in similar pursuits. His camp in the Adirondacks led to the formation of the Upper Saranac Association, a corporation of which he was the president and which owned and operated the " Saranac Inn," a popular and successful resort on Upper Saranac Lake on which his own extensive camp was located. This association ran a saw mill and maintained a large store for supplying the camps on the lake, with a steamer making regular trips and furnishing them transportation and provisions and delivering express matter and mail. It built and rented cottages and camps for summer occupancy, and this enterprise has been an extensive one for many years, the corporation owning a large tract of valuable land and its success has been largely due to his foresight and efficient management. It was in his camp at this place that Mr. Cleveland when Governor, and afterwards when President, used to visit him, and here they hunted and fished together. The last visit which he made to New York was for the purpose of attending a meeting of this association, and in a cottage near the inn and on its grounds, fitted up for their winter occupancy, he and Mrs. Ward passed the winter of 1914-15, enjoying their drives through the woods and on the lake and entertaining their friends.

But these are digressions. We have seen that Dr. Ward came to Albany in 1876 and entered into a general and surgical practice being appointed surgeon to both the Albany and St. Peter's Hospitals, and in 1880 clinical surgery was added to his chair of surgical pathology and operative surgery. In 1883 Dr. J. S. Mosher, professor of practice in the medical school and a warm personal friend, died suddenly and Dr. Ward was appointed to fill the vacancy thus created, becoming professor of pathology, practice, clinical medicine and hygiene which title he retained until 1889. He relinquished his surgical practice and thereafter confined himself to general medicine the chair of surgery in the college being consolidated. He was made attending physician to the Albany, and consulting physician to St. Peter's Hospital, and subsequently to the South End Dispensary. In 1889 the title of his chair was changed to theory and practice of medicine and thus remained until the condition of his health caused him to resign it early in 1914, and in the succeeding June he was made emeritus professor. From 1904 to the resignation of his active professorship he served as dean of the faculty. During these years he built up a large general and consultation practice, and, as was natural, the alumni of the school in which he taught so long and successfully looked often to him for counsel and advice. His lectures were carefully prepared and well delivered, and his clinical instruction was both thorough and systematic. He was a fluent and entertaining speaker; his manner in the lecture-room was such as to secure and hold the attention of his hearers, for it was dignified without too much formality, and unconstrained without undue familiarity. He was admired and respected by his students and those, and they were many, who came into close contact with him entertained for him a feeling of affectionate regard. Being naturally a student he kept abreast of the advances which medicine has been so rapidly making during recent years and as a result his instruction was not perfunctory nor his lectures stereotyped, but his teaching was up-to-date and based upon recent knowledge though he was too wisely conservative to exploit mere novelties at the expense of fundamental and essential facts.

As a surgeon in his earlier professional life Dr. Ward had been eminently successful. Being a skilled anatomist he was a dextrous operator and in his class demonstrations and clinical teaching was both thorough and intelligible. In the conduct of an autopsy his knowledge of both normal and pathological anatomy made his examinations highly satisfactory and convincing for they were both exhaustive and precise. As a general practitioner he was no less successful than as a teacher. He was a good diagnostician because not only erudite but systematic, exact and thorough in his examination of cases, and careful, judicious and precise in his application of therapeutic measures. In the sick-room his manner was authoritative and decided, but it was pleasing and cheering and such as to inspire confidence and secure the ready co-operation of the patient and his attendants. As to this the writer speaks from a personal knowledge and with assured conviction for he was his medical adviser from the time that he came to Albany, ushered his children into the world, and attended his family and himself in many illnesses, and his affectionate, devoted and invaluable services cannot be measured in words nor will they ever be forgotten.

In attempting to delineate Dr. Ward's character and to portray the traits which made his personality so attractive and engaging his remarkable adaptability, affability, tact and versatility should be emphasized. The possessor of a keen and able mind he was an excellent conversationalist, quick at repartee, with a sense of humor, and an excellent story-teller. He was at home in any society, cordial in his greeting, said the right thing at the right time, was himself always easy and self-possessed and those who met him for the first time felt quickly at home in his society. It was easy for him to make friends for in dealing with people of any type he instinctively adapted himself to their level without pretension or affectation on the one hand, or condescension and undue familiarity on the other. He was always a gentleman, exhibiting a kindly interest in all men, having a regard for the feelings of others and making allowance for human imperfections, so that he could chat with a chance acquaintance whether a day laborer, backwoodsman or artisan in a manner entirely natural and unconstrained. It was this adaptability and affability which gave such charm to his companionship and this charm was enhanced by a remarkable versatility. It is often said of a man that he is a jack of all trades and master of none, but Dr. Ward was master of several things and remarkably proficient in many other directions. He spoke French fluently and read both French and German; was a good mathematician; understood surveying and once made a map from his own survey of Upper Saranac Lake; had a fair knowledge of analytical chemistry which he had studied with his friend Professor Chandler in the School of Mines; had a general and some technical knowledge of astronomy and other physical sciences; was expert in photography; a good marksman and as a mechanic very clever in the use of tools; was fond of cards and a good player; and he was a great reader and particularly of the Bible which always stood on his desk and with which he was very familiar. He once asked a friend if he knew that automobiles were mentioned in the good book. His friend didn't. Turning to Nahum, second chapter and fourth verse he read:—" The chariots shall rage in the streets, they shall justle one against another in the broad ways; they shall seem like torches, they shall run like the lightnings." During his last winter at Saranac he occupied some of his leisure time at a work bench, and of this in a letter he writes:—" I have had a lot of fun in making all sorts of things out of old cigar boxes and other kinds of soft woods. I have just finished a very superior box for Mrs. Ward's Victrola records. Our carpenter has made me a little work bench which is the joy of my life and I am now very busy fitting up shelves to hold the tools conveniently and compactly." One of the products of his ingenious industry he sent to the writer last Christmas as a present. It consisted of a small, folding book-easel, hinged and with a ratchet to permit its inclination at different angles, deftly constructed from cigar box wood in single, or glued together in double or triple thicknesses, neatly mortised and with bevelled ends, and such work as this he did not only ingeniously but in a thoroughly workmanlike manner. Mention is made of it as indicating his habit of doing anything well that he undertook to do at all. He was among the early users of the flashlight in photography, had good lenses and took excellent indoor and outdoor photographs; was a member of the Camera Club, and for a time its president. He had many scientific friends, enjoyed discussing their work with them, and in this way broadened his knowledge greatly, for what he learned he remembered, and when a subject was under discussion he fixed his undivided attention upon it until he came to an understanding of it and appreciated its details.

Dr. Ward was fond of social life, entertained frequently, was a good host and had many visitors in his home. He was a capital *raconteur* with a large fund of anecdotes and good stories ready for all occasions, was a fluent and entertaining speaker, and was often called upon to preside, or to act as toastmaster, at public dinners, and his presence at the banquets of the State Medical Society, when it used to meet regularly in Albany, and at the alumni dinners of the Medical College, was always expected. He was a member of the Fort Orange Club, and had been its president, of the Country Club, and of the University Club and Century Association of New York City. He had a good recollection of names and faces and was widely known and very popular with the alumni of the school in which he taught so long and with the members of his profession generally. He was a good correspondent and his sense of humor gave a charm to his letters as a few quotations from some to the writer may show. At a time when the recipient was resting up in another place after an illness he wrote:—"Now if you don't feel up to par next Monday do stay another week. It may seem almost incredible, yet if you and I were both to 'join the majority' this week the A. M. C. would survive, and your being away for another week will make much less difference than your *permanent* removal!" He was fond of nature, loved birds and flowers, was a careful observer and had a general knowledge of the natural history branches. Writing from Thomasville, Ga., where he was spending the winter, in March, 1914, he says:—"The flowers are wonderfully beautiful and the thrushes and mocking birds are singing nearly all day long. The wistaria is just beginning to be really beautiful; it covers our front porch and a trellis at the side of the house. The air, hot or cold, wet or dry, is at all times perfectly delicious and with the thermometer at 78 degrees as I write it is hard to realize that you are not romancing a little when you tell of the snow and ice in the streets of Albany. Among the bushes in the yard is one the like of which I have never seen before. It is the *metrosideros floribunda,* about fifteen feet high and quite symmetrical in shape. I am sending you a branch for a description in words would give you no idea of what it looks like. At the end is the bud which in a week or two will be a superb red; about five inches back of this bud are the seeds, resulting from the flower of last year, clinging to the stem. It is quite rare even here, this being the only one in town." And referring to it again in a later letter he writes:—"I think I forgot to tell you that its common name is the "bottle brush," though it does not look in the least like either a bottle or a brush, nor yet as if it could be used to brush a bottle." Being a native of the West Indies the plant is not mentioned in the ordinary treatises on botany and it was not recognized by a botanist to whom the specimen was shown though it is now grown by florists as the azalea is. Referring to the mention in a letter of pleasant things which had been said about him at the alumni dinner in May, 1914, when he was still in the South, he writes:—"It was very gratifying to me to hear that kind things had been said about myself; I do not know exactly on what they could have been based except that I have honestly tried to treat all with whom I have come in contact with respect and decently." Nothing could be truer. Those who have seen him under trying circumstances, when in some heated discussion others have lost their temper and spoken harshly, have seldom seen him perturbed or heard him speak with acerbity, and this restraint which he habitually exercised was due to no mere politic expediency nor to a lack of positive convictions, but was the result of a nature naturally kindly and charitable and having just regard for the feelings and the opinions of others. Referring to the faulty construction of a new dam at the outlet of Saranac Lake he writes:—"I have been struck more than ever before with the dense ignorance of the average man on all questions of physics. Some of them advance the most astonishing propositions that you ever heard." Alluding to a vacancy on a board with which he was connected he writes:—"The trouble in having so many old, wealthy and eminently respectable men on a board is that you cannot get anyone to do anything." His natural serenity under trying circumstances which has been referred to is well indicated by an allusion to an exasperating newspaper article, relating to others, concerning which he writes:—"You were all wise in not being drawn into any controversy; I have never known such to pay from any point of view. It is sometimes hard to resist the temptation when you feel that you have been badly treated but no good ever comes of it." His liking for astronomy has been mentioned and from Saranac in November, 1914, he writes:—"I brought up with me a very good little telescope magnifying forty diameters and have been interested in looking at the heavens. We had a very good view of Delavan's comet; it is not at all a brilliant object but you can find it any clear night. Venus is a beautiful little crescent just like the new moon only on a greatly reduced scale. On two evenings Jupiter has been good enough to show us all four of his moons. This reminds me that some years ago I was showing our moon to some guides with this same telescope. One of them looked at it very intently for some time and on turning away he said to me, 'Golly, doctor, that has all been lumbered over, hasn't it?'" And again in the same month he says:—"The transit of Mercury took place at an hour when all good Christians are in bed and of course I did not see it. A few days before its transit it presented a beautiful little crescent, just like the new moon, on a very small scale. I thought at the time that it was Venus but later discovered my mistake." In the same letter he writes:—"I heard a story the other day that seemed to me to be rather amusing. When George Vanderbilt had about finished Biltmore a neighboring North Carolina cracker, who had never seen the place, came to look it over. Vanderbilt happened to see him, went out, spoke to him, showed him all over the house and grounds, during all of which time the visitor said not a single word either of praise or condemnation. As he was leaving Vanderbilt asked him what he thought of it all. His reply was, 'Mr. Vanderbilt, I am a man of few words, but after what I have seen to-day I am decidedly of the opinion that the New Jerusalem will have to hustle.'" His knowledge of human nature is shown by his remark concerning a physician who had not been very friendly to the medical school but had nevertheless been asked to make an address on a certain occasion. It was good policy, he thought, to ask him to do so. "In the ——— club," he writes, "for many years we have got rid of all kickers very speedily by putting them on the board of trustees. They became at once the strongest advocates of the administration."

In another letter he writes in a humorous vein of the little book-easel to which reference has been made. "You praise the workmanship," he says, "too highly, but if any duffer wants to do better he has my permission to try. One who has not tried it has no idea how difficult it is to make such a frame *perfectly* square and make two frames lie evenly over each other. The hinges have to be adjusted with great care. The rack is made of the covers of Manilla cigar boxes. One can understand that it might pay to veneer the case of a piano with rosewood, but until I saw these it never occurred to me that it could pay to veneer cigar boxes with cedar and yet that is exactly what has been done. You may wonder that I selected cigar boxes for this use. You know how much we have heard of late about the high cost of living, and the statement has been made that it is in great measure due to the wastefulness of our fellow-countrymen. Now the part that any one item will have in this calculation will depend on how universal the waste is. I suppose that you will agree with me that no other one thing has been more universally wasted than cigar boxes, and therefore this is in great measure the cause of our distress. I am in hopes that drawing the attention of my fellow-countrymen to this fact, and setting them the example of rectifying it, will, in the course of two or three centuries, and that is a very short geological period, make a marked difference. I must admit however that I feel very doubtful whether I shall get anything like the credit which I feel to be my just due for this discovery." In January last, writing from Saranac, he says:—"Yesterday morning we had thirteen inches of the most beautiful clear blue ice that you ever saw all ready to begin to store it this morning but yesterday a January thaw set in, it rained all night, great patches of grass are visible on the lawn, and you can imagine the condition it is in this morning. We had our first ride on the ice yesterday. We went down as far as Runkle's camp and intended to go on down the lake, but we came to a crack about six inches wide, through which water was coming up freely on to the snow, and Willard Boyce didn't think it was safe to try to go further just yet. The physics of the action of ice in its formation and melting are a most interesting study up here. Of course the cracks come from the contraction of the ice after it has formed and their occurrence is accompanied with a report quite as loud as that of a good-sized cannon; quite loud enough to wake one out of a sound sleep. You are probably familiar with the fact that when a hot and a cold water pipe run alongside of each other, and freezing weather comes, it is always the the hot water pipe that freezes first, and the cause of the phenomenon. I did not know it until this winter." And a few days later, the weather having turned cold again, he writes:—"I do not know whether you have ever had the opportunity to drive all over a big lake like this on the ice; the novelty of it is quite fascinating. Last Friday was a bright, perfect day, with no wind and the thermometer at fifteen degrees above zero. We drove down to the club at Bartlett's old place, about sixteen miles in all, and enjoyed it hugely. I was quite willing to sit by the fire for a while after returning, but the sensation of *being* cold is not a disagreeable one to me as it seems to be to some, and I never *catch* cold by *being* cold; I think that very few, if any, do; colds, so-called, are ninety-nine times out of a hundred, some form of infection."

Dr. Ward held at various times many positions of honor and trust. He was a member of the Medical Society of the County of Albany, served as delegate to the State Medical Society and to the American Medical Association, as censor in 1880 and as its president in 1902, attended its meetings regularly, took frequent part in discussions and read many papers before it. He was a permanent member of the State Medical Society, its president in 1888, a member of the American Medical Association, and of the Association of American Physicians. In 1883 he was appointed a member of the City Board of Health and the same year was made a governor of the Albany Hospital and so continued until his death. In 1885 he was made president of the examining board of the State Civil Service Commission; was at one time president of the New York State Board of Survey; in 1885 was appointed by the Regents a member of the executive committee of the State Normal School and was for many years secretary and treasurer of this committee, the institution being now known as the State College for Teachers. He was a trustee of the Albany Female Academy, of the Albany College of Pharmacy, president of the board of trustees of the Dudley Observatory, a member of the board of governors of Union University, and, for a time, surgeon of the Fifth (formerly the Ninth) Brigade, National Guard, State of New York. He was a member of the Military Order of the Loyal Legion. The degree of A. M. was conferred upon him by Columbia in 1864, and he received the honorary degree of M. D., from the Albany Medical College in 1878, and of Ph. D., from Union in 1882. For many years he attended St. Peter's Church and, subsequently, the Episcopal Cathedral of All Saints; his knowledge of and love for the Bible has been referred to; he had many friends among the clergy and was interested in theological subjects, but, restrained perhaps by moral scruples or intellectual uncertainties, was not minded to subscribe to the set terms of a theological creed. He may have felt with the author of "In Memoriam" that "there lives more faith in honest doubt, believe me, than in half the creeds."

Dr. Ward's contributions to medical literature have not been catalogued but they were numerous and important as reference to the files of this, and other journals will show. They included the following, all published in the ALBANY MEDICAL ANNALS unless otherwise stated:

"Embolism of the Arteries of the Extremities," *N. Y. Med. Jour.*, 1874.
"The Sphygmograph and its Uses," *N. Y. Med. Record,* vol. iii.
"New sign of effusion in Pleurisy," 1877.
"Rose's Test for sugar in the Urine," 1878.
"Introductory Address Albany Medical College," 1878.
"Cardiac Syncope," 1880.
"Carcinomatous Papilloma of the Bladder," *Archiv. Med.,* N Y., 1882.

"Pistol wound of Chest," 1883.
"Ataxia of Syphilitic origin," 1885.
"Criminal Abortion by inflation of Uterus with Air," 1889.
"Medical Expert Testimony," address as President State Med. Soc., 1889.
"Climatic treatment of Pulmonary Phthisis," *Tr. N. Y. State Med. Soc.*, 1891.
"Aphasia," 1894.
"Primary Colloid Cancer of Pancreas," 1899.
"Medical complications of Gonorrhoea," 1900.
"Address to Graduating Class Training School for Nurses," 1901.
"Case of Dysentery due to Double Infection," 1903.
"Acute Ulcerative Endocarditis," 1903.
"Lipoma of the Intestine," 1904.
"Surgery of twenty-five years ago," 1905.
"Erythema and Urticaria from exposure to Sun's Rays," *N. Y. Med. Jour.*, 1905.
"Address at opening of Albany Medical College," 1906.
"History of Medicine in State of N. Y., in last One Hundred Years," 1906.
"Acute Thyroid Intoxication," 1908.
"Treatment of Pulmonary Tuberculosis," 1909.
"Use of Nitro-glycerine," 1909.
"Unusual Case of Tuberculosis," 1911.
"Treatment of Diseases of the Heart," 1912.

Dr. Ward married Nina, daughter of William A. Wheeler, of New York, October 10, 1871, who died October 19, 1883, by whom he had three children, Nina, Annie Wheeler who married Henry Manning Sage and has two daughters, and Samuel Dwight who married Edna Brady. April 29, 1897, he married Grace Fitz-Randolph, daughter of the late Reverend Noah Hunt Schenck, D. D., of Brooklyn, and widow of Erastus Corning, 3d, of Albany.

Dr. Ward enjoyed exceedingly good health during the greater part of his life and, indeed, was seldom ill until attacked by sciatica some six years ago which caused him a good deal of discomfort and gradually developed into a painful sciatic neuritis that resulted in a lameness which rendered walking difficult at times and obliged him to depend upon his automobile. He was fond of horses and for years had driven a well bred and very intelligent white-faced horse that was familiar to all his friends, knew the location of all his patients and to which he was much attached. He had scoffed at "devil wagons" as he called automobiles but later came to recognize their usefulness and, having acquired the habit, took as much pleasure in them as most other people do and frequently used his for long pleasure trips which he greatly enjoyed. In the summer of 1913 his neuritis gave him much trouble and confined him to his room for some weeks but he was benefited by the treatment which he received and took up his work in the fall with enthusiasm. As the winter approached he was not as well and at the end of January was advised to seek a warmer and more equable climate. He went to Thomasville, Ga., with his wife, took a cottage and there remained until the middle of June. He was benefited by the change of climate and freedom from care but it is evident from his letters that he had made up his mind that he would never resume active practice again. For in April he writes:—"You will readily believe that it is far from agreeable for me to feel that I must sever the relations of so many happy years of work in the school, in the success of which we all feel such a deep interest, and in which we have all worked together so harmoniously, and, I think we may fairly say, with success. But really I can see no other course that would be fair and for the best." And in May:—"I am not given, as you have doubtless found out, to 'wearing my heart on my sleeve,' but the arriving at the decision that I *must* sever my connection with the old college, and probably never go back to Albany to reside, has been the most bitter pill that I have ever been called upon to swallow. * * * I *must* give up a full year at the very least to regaining my health. * * * I don't even care so much about giving up the lectures and the hospital, but giving up my association with friends of so many years' standing is mighty hard." He came north about the middle of June and went directly to Saranac Inn and at the end of July went to Narragansett Pier and visited his brother. Returning to the Inn he decided to spend the winter there and after the Inn and the Annex were closed moved into the cottage which had been fitted up for winter occupancy and to which reference has been made. In December he made a trip to New York, stopped at Albany for a few days before Christmas, and then returned to Saranac Inn. Although happy and contented and finding plenty to occupy his time it was not difficult to see that he was not gaining, but rather was losing, ground. Early in March he made a trip to

Montreal, consulted a professional friend, and returned to his house in Albany which he was destined never to leave again. His mind retained its habitual vivacious activity, his old-time cheerfulness and courage never failed, and, visited from time to time by his old and intimate friends, ministered to by a loving wife and the members of his immediate family, unperturbed and without fear, quietly and peacefully, he passed to the rest which without apprehension he had anticipated. He died June 3, 1915, within a few days of his seventy-third birthday.

The funeral was held on Sunday, June 6, Dr. Battershall, rector emeritus of St. Peter's Church, conducting a service at the house attended by the family and some intimate friends, and at All Saints Cathedral where Bishop Nelson and Dean Brookman officiated and the vested choir sang. The bearers were: Drs. A. Vander Veer, F. C. Curtis, J. F. Rooney and W. G. Tucker, of Albany, Drs. A. Jacobi of New York and J. H. Mitchell of Cohoes, Gen. S. W. Rosendale, ex-Governor Martin H. Glynn, Thomes E. Finegan, Edward Bowditch, Marcus T. Hun and Grange Sard. Interment was in the Rural cemetery where Dr. Battershall read the committal service. The members of the County Medical Society assembled at the Law School near the Cathedral and attended the service in a body, and a committee consisting of Drs. A. Vander Veer, Morrow, Craig, Babcock, Tucker, Bendell, Curtis and Rooney was appointed to prepare a memorial minute for presentation at a special meeting of the society. This meeting was held, June 10, in the State Education Building, and was largely attended. The report of the committee was presented and adopted and remarks were made by many of those present. The proceedings of this memorial meeting will be published later in this journal as part of the transactions of the society.

The passing of this remarkable man leaves a vacancy which can hardly be filled. Men come and go; vacant places are soon occupied but not always filled; in the hurry and bustle of the time we are prone to magnify the present things and forget those of the past, but those who knew Dr. Ward, and knowing appreciated him, and esteeming, loved him, will never cease to remember his rare personality. The world is the better because he lived in it and the sphere in which he moved was the brighter by reason of the light with which he illumined it. He did good to many and wilfully harmed no man, and he has left behind him a fragrant memory that will long remain,—the best and most enduring legacy that may be bequeathed by man to those who come after him.

> "His life was gentle; and the elements
> So mix'd in him, that Nature might stand up
> And say, to all the world, 'This was a man!'"

Addresses

UNION UNIVERSITY

MEDICAL DEPARTMENT

ALBANY MEDICAL COLLEGE

Opening of the Eighty-Fifth Session, September 27th, 1915

ADDRESS OF SIMON W. ROSENDALE, LL. D.,

President of the Board of Trustees.

Gentlemen of the student body: In the name of the Board of Trustees you are bid a sincere welcome to these halls—those of you who are resuming, as well as those who are assuming the duties and obligations of studentship, because there are for you both duties and obligations—duties to yourselves and the community, and obligations to the institution with which you have united yourselves.

Albany has a warm place in its affections for the Albany Medical College, not alone out of the highest esteem for its founders, who instituted, and for many years guided and directed its affairs, and some of whom are held in affectionate remembrance by many citizens who still recall them—but out of recognition of the labors of, and personal regard for their successors—those men who for years have identified themselves with this school and whose efforts and devotion to its best interests will remain upon its records so long as it shall endure. It is the earnest hope and desire on the part of every well wisher of this institution that the kindly and friendly interest of these worthy successors of the founders may be continued, and that they may share and participate in the gratification which shall come with the further progress and assured future of this institution.

There is a reason, however, beyond these personal considerations, which creates this interest in and affection for the Albany Medical College, in this community. While this city is proud to be the political center of our great commonwealth and is ambitious for its commercial, mercantile and manufacturing development and standing, there is a still higher and loftier ambition, which is, that Albany shall deservedly command and maintain an eminent place as a social and educational center. To the development and maintenance of such a distinction this institution has largely contributed during the last three-quarters of a century, and its Board of Trustees are certain that they may with entire confidence appeal to, and rely upon, prompt and generous response on the part of this community to any needs for the maintenance and perpetuity of the Albany Medical College.

In the great advancement which the medical profession in recent years has made, new requirements are found necessary on the part of the physician and surgeon and, reflectively, of medical students and medical schools. The educational department of the State makes certain requirements as to teaching, such as, at least, a certain number of full time professors and other provisions which are being met by this institution.

So, too, the most influential medical bodies in the country seem to require that medical schools shall be part of, or at least affiliated with universities. Provisions, looking to this end, were made many years ago by our predecessors. Forty years ago, pursuant to law, an agreement was made between Union College of Schenectady, the Albany Medical College, the Albany Law School and the Dudley Observatory, to organize and create Union University—to these was added the Albany College of Pharmacy afterwards instituted, and these together form the university from which emanate the degrees which are conferred.

The affairs of the University are in the hands of a Board of Governors, which is composed of representatives from its different entities. During the past year the educational policy of this College has been placed in the hands of an executive committee, under the sanction and composed almost wholly of

Governors of the university, so that to-day this institution as to its educational policy is most closely allied to and under the control of Union University.

After all, you gentlemen, are and are to be the beneficiaries of these efforts. If your acceptance and advancement and final graduation means much to you, it also means much to us; you are to be the fruits and finished product of our educational activities—your proficiency is to be a test of our efficiency. In fact, in the testing of you, the efficiency and work of this college is to be tested.

While no one will seriously claim that the State examination for admission to the practice of the medical profession is a complete or conclusive test of the general education of the candidate, or even of his scientific or technical qualifications, nor should preparation for such examination by any means be the sole or main purposes of a school; the results of these examinations are, nevertheless, most important factors in fixing the rating and standing of medical schools by those high in influence, whose methods and conclusions, in this respect, at least, it is impossible to ignore. So that as you, individually, succeed in your State examinations will our success largely be judged. It is therefore, in the language of the day "up to you" to maintain and aid in elevating the standing and rating of this institution. The obligation to us which we are desirous that you should realize and keep before you is, that by diligence and attentiveness, by availing yourselves of and profiting by the opportunities offered you, to be helpful to your professors and teachers in producing successful results, and that when you leave the portals of these time honored walls, you will be glad to have selected this as your alma mater and be proud to have your names enrolled with the illustrious list of the members of its Alumni.

To you, Dean Ordway, and your associates is committed the practical efforts to be made in the educational work in which we are engaged. The board has entire confidence from your attainments and your zeal, that with united effort and harmony in the teaching force, all of which we feel is assured, you will realize the high ideals which we know dominate you and those who are acting with you, to maintain and advance the best interests of the Albany Medical College.

ADDRESS OF CHARLES ALEXANDER RICHMOND, D. D., LL. D.

Chancellor of the University.

Nothing in the history of education in this country for the past decade has been more significant than the change in medical education. The demand for a more thorough training has been so loud and insistent that even our medical schools have had to sit up and take notice. The result has been that about one out of every two of our medical schools has been obliged to succumb, in most instances it must be confessed, much to their own relief and to the general satisfaction of the community. A few years ago the United States had half as many medical colleges as all the rest of the world combined. Now, with a population of one hundred million, we have numbers out of all proportion to that of the other eleven hundred millions, or more, of the human family. Perhaps we are a very sickly people—or perhaps the rest of the world is cruelly neglected—however that may be there can be no doubt that the keener competition and the higher demands that are sure to come will eliminate still more of these medical schools which have flourished in such abundance. It will be, as it always is, the survival of the fittest.

We believe that this medical school will survive. Not only so but we believe that it will grow stronger as the demands become more severe. We believe this because we believe that the spirit that is in this school is the kind of spirit which is able to stand the acid test and, by that I mean a spirit that is not only scientific, in the best sense, but also a spirit which is unselfish and humanitarian, a spirit that is willing and glad to make great sacrifices and endure great labors in order that the noble profession to which it is devoted may be elevated and in order that the larger cause of humanity may thereby be served. There are certain legal standards which the State requires of every medical school but any self-respecting medical school will set for itself a far higher standard than any which the law may set. We do not call a man a good citizen just because he keeps out of jail. No more do we call a medical school a good school just because it manages to be a shade higher than the irreducible minimum which a long suffering public demands. The standard which we have set for ourselves here is a high standard. It will be our aim to raise that standard still higher. We are eager not only to meet the demands of enlightened public opinion but to go beyond those demands. We mean that every man who holds a diploma from the medical department of Union University shall not only be able easily to meet the requirements of the State examination but shall be known as a man fully competent to practice his profession from the very fact that he is a graduate of this school. My own desire is that there may be the closest co-operation between this school and Union College. The opportunities for mutual help are greater than we have ever fully realized. We have begun to see more clearly the advantage we may be to one another. The one year pre-medical course offered at Union College will, we hope, before long be extended to a two year course. And we hope then to put more English into that course so that some graduates in medicine at least may be able to speak and write their own language with some reasonable approach to correctness. I suppose for the present we must regard this as a dream of luxury which must give way to the more pressing demands of technical instruction. But some day this dream also will come true. At the opening of this new academic year I bring to you the greetings and congratulations of Union College and I pledge you our most earnest co-operation.

ADDRESS OF THOMAS ORDWAY, M. D.,

Dean of the Medical Department.

Alumni, students, and friends: On behalf of the faculty and teaching staff of the Albany Medical College I welcome you to this opening session of the department of medicine of Union University.

During the past year this medical college has been reorganized. True university control has been established and financial support pledged for this new formative period. This has been made possible by these public spirited men—the Board of Trustees—who have, in a most altruistic manner, given with exceptional liberality of their time and personal funds. To them and to the Governors and Chancellor of Union University, the students, alumni, and teaching staff of the Albany Medical College and the citizens of Albany owe a debt of gratitude for their will to advance the cause of medical education.

It is believed that a school of medicine—as is the case with a small college of arts—with modest plant and small, carefully selected and co-operative faculty with highest standards of teaching and scholarship can render effective service in the field of medical education.

The development of the large medical university of to-day tends, in certain instances, to cause more or less "isolation" of the separate departments—each being, as it were, according to the German custom an institute—a school within a school. Thus there is apt to be lack of co-operation, of informal exchange of ideas, and of helpful criticism.

In the small school there is opportunity for intimate relation between the professor and the student and such a relationship is particularly desirable in a profession which is so much of a craft as medicine. It is hoped that this individual touch can be retained if the classes are restricted to thirty or forty in number.

The curriculum has been radically altered. In the first year and a half—in the so-called laboratory branches—the "concentration" system has been adopted. The students will spend the entire day during the first half of the first year in the intensive study of anatomy and its subdivisions, microscopic anatomy and embryology. Physiology and biological chemistry are studied in the second half of the first year and pathology, bacteriology, parasitology and public health in the first half of the second year are taught in a similar manner. This not only economizes the time of the student and focusses his attention but allows opportunity for special study and research without which neither student nor teacher can surely advance.

In the so-called clinical years, however, the concentration system has certain disadvantages. It does not allow the student opportunity to observe the *natural history* of *disease* which is of utmost importance in prognosis and in accurately estimating the true value of therapeutic procedures. For this reason almost all of the clinical subjects are studied in both the third and fourth years. The third year is devoted to dispensary work and special clinical and didactic instruction to prepare the students for the section work of the fourth year. In the fourth year the students in small groups serve as assistants and have actual responsibility for patients under close supervision, personal teaching which retains many of the good features of the old preceptor system.

Upon beginning the study of medicine at the present time three fields are open to the properly trained graduate. He may take up the practice of medicine, he may devote himself to research or he may enter public health work. It is not possible, however, for him to become a specialist in any of these fields after four years of medical study but he should obtain such knowledge of each as to give him at least a sympathetic understanding and appreciation. The instruction has been so arranged that students should not only realize the opportunities afforded in modern public health work but should feel their obligations to the public on assuming the duties of practice.

In order to fulfill such aims in medical education, the expense for construction and maintenance, equipment, apparatus and salaries of properly trained, full time men are great and not more than one-fourth to one-half of these expenses can possibly be paid by the fees received from the medical students. If large classes are sought in the attempt to make the students' fees cover these expenses the ideal of a small college of medicine with its advantages cannot be realized. It is hoped that the alumni of this medical college and the people of Albany and vicinity will see the value of this important experiment in medical education—a small professional school, with personal contact between teacher and student and with highest standards of teaching and scholarship. If this is to be permanently successful it will need for maintenance co-operation in sympathetic interest and financial support.

Original Communications

ALBANY HOSPITAL.

Thirteenth Report of Pavilion F, Department for Mental Diseases, for the Year Ending September 30, 1915.

By J. MONTGOMERY MOSHER, M. D.,

Attending Specialist in Mental Diseases.

To the Board of Governors:

I have the honor to present the thirteenth report of Pavilion F, for the year ending September 30, 1915.

There remained in the Pavilion on October 1, 1914, thirty-two patients—seventeen men and fifteen women. There have been admitted two hundred and twenty-five men and one hundred and fifty-three women. The whole number of patients under treatment was, therefore, four hundred and ten.

There have been discharged three hundred and eighty-four patients—two hundred and twenty-six men and one hundred and fifty-eight women, and there remained in the Pavilion at the end of the year, sixteen men and ten women.

The following tables show the forms of disease and the results of treatment for the year, and since the opening of the Pavilion:

TABLE I.—Showing the Forms of Disease and the Results of Treatment for the Year Ending September 30, 1915

Form of Disease	Recovered		Improved		Unimproved		Died		Remaining		Total		Total
	M	W	M	W	M	W	M	W	M	W	M	W	
Acute delirium	2	10	1	1	...	2	2	3	...	1	5	17	22
Confusional insanity	1	...	6	6	10	14	...	1	1	1	18	22	40
Melancholia	1	6	8	9	9	8	1	1	4	5	23	29	52
Mania	2	1	1	3	3	2	...	...	1	...	7	6	13
Primary dementia	1	1	6	3	10	10	1	...	2	1	20	15	35
Recurrent insanity	...	...	1	...	1	2	...	...	...	1	2	3	5
Chr. delus. insanity	...	...	...	...	5	6	...	...	...	...	5	6	11
General paralysis	...	...	1	...	6	2	...	...	...	...	7	2	9
Terminal dementia	...	...	4	2	20	11	7	3	1	1	32	17	49
Idiocy and Imbecility	...	...	...	1	6	4	...	...	...	...	6	5	11
Alcoholic delirium	18	1	5	...	...	...	1	...	2	...	26	1	27
Alcoholism	1	...	43	9	1	2	...	...	1	...	46	11	57
Drug addiction	2	4	11	8	2	...	...	2	...	...	15	14	29
Hypochondriasis	...	...	2	...	...	...	...	...	...	...	2	...	2
Epilepsy	...	...	1	2	1	1	...	...	2	...	4	3	7
Neurasthenia	...	...	...	2	...	...	...	...	...	...	...	2	2
Hysteria	...	1	...	3	...	...	...	...	...	...	...	4	4
Organic brain disease	...	...	2	2	3	...	2	3	1	...	8	5	13
Cerebral concussion	1	...	1	...	...	...	...	...	1	...	3	...	3
Meningitis	...	...	...	...	...	...	...	1	...	...	...	1	1
Chorea minor	...	...	...	1	...	...	...	...	...	...	...	1	1
Tuberculosis	...	...	...	...	...	...	1	1	...	...	1	1	2
Pneumonia	...	...	...	...	...	...	1	1	...	...	1	1	2
Organic heart disease	...	...	...	...	...	...	3	...	...	...	3	...	3
Locomotor ataxia	...	...	1	1	1	...	...	...	...	...	2	1	3
Carcinoma	...	...	...	...	1	...	...	...	...	...	1	...	1
Nephritis	...	...	...	...	1	...	2	...	...	...	3	...	3
Cirrhosis of liver	...	...	...	...	...	...	1	...	...	...	1	...	1
No diagnosis	...	...	...	...	...	...	...	...	...	...	1	1	2
Totals	29	24	94	53	80	64	22	16	16	10	242	168	410

TABLE II.—SHOWING THE FORMS OF DISEASE AND THE RESULTS OF TREATMENT SINCE THE OPENING OF THE PAVILION, FEBRUARY 18, 1902

FORM OF DISEASE	Recovered		Improved		Unimproved		Died		Remaining		Total		Total
	M	W	M	W	M	W	M	W	M	W	M	W	
Acute delirium	42	62	21	25	7	20	16	15	...	1	86	123	209
Confusional insanity	14	11	41	45	41	69	5	6	1	1	102	132	234
Melancholia	31	48	54	127	63	119	3	11	4	5	155	310	465
Mania	9	17	16	33	36	46	1	...	1	...	63	96	159
Primary dementia	5	7	35	20	65	39	1	...	2	1	108	67	175
Recurrent insanity	1	...	14	24	18	25	...	...	...	1	33	50	83
Chr. delus. insanity	...	...	3	7	53	54	...	1	...	...	56	62	118
General paralysis	...	...	6	1	65	11	4	...	...	...	75	12	87
Terminal dementia	...	...	48	40	158	128	37	25	1	1	244	194	438
Idiocy and Imbecility	...	...	24	15	48	42	1	...	...	...	73	57	130
Alcoholic delirium	279	18	37	7	4	2	33	2	2	...	355	29	384
Alcoholism	20	5	322	38	30	7	4	...	1	...	377	50	427
Drug addiction	18	13	27	19	7	6	3	5	...	...	55	43	98
Ptomaine poisoning	1	2	...	...	...	...	...	1	...	...	1	2	3
Nephritis	...	...	2	1	2	...	10	3	...	...	14	4	18
Eclampsia	...	1	1	...	...	1	...	1	...	...	1	3	4
Epilepsy	...	...	22	8	22	9	1	...	2	...	47	17	64
Neurasthenia	4	1	25	20	6	14	...	...	...	...	35	35	70
Hysteria	2	14	2	30	1	6	...	...	...	...	5	50	55
Chorea minor	1	1	...	1	1	1	...	...	...	...	2	3	5
Exophthalmic goitre	...	...	...	1	...	...	...	...	...	...	....	1	1
Tic douloureux	...	...	...	1	...	...	...	...	...	...	....	1	1
Hypochondriasis	...	...	16	...	6	...	1	...	...	...	23	....	23
Organic brain disease	...	...	15	10	24	6	13	10	1	...	53	26	79
Cerebral concussion	5	1	4	...	1	...	...	...	1	...	11	1	12
Oedema of the brain	...	...	...	...	1	...	1	...	...	...	2	....	2
Locomotor ataxia	...	...	3	3	1	1	...	1	...	...	4	5	9
Cerebro-spinal syphilis	...	...	2	...	...	...	...	...	...	...	2	....	2
Myelitis	...	...	...	...	...	...	...	2	...	...	....	2	2
Arthritis deformans	...	...	...	...	...	1	...	...	...	...	....	1	1
Meningitis	1	...	1	...	...	...	9	2	...	...	11	2	13
Multiple neuritis	...	...	1	...	...	1	...	...	...	...	1	1	2
Paralysis agitans	...	...	...	...	2	...	1	...	...	...	3	....	3
Hydrophobia	...	...	...	...	...	...	1	...	...	...	1	....	1
Tetanus	...	...	...	...	...	...	1	...	...	...	1	....	1
Tuberculosis	...	...	3	...	2	1	24	5	...	...	29	6	35
Typhoid fever	3	1	...	...	...	...	...	...	...	...	3	1	4
Liver disease	...	3	...	...	...	...	2	1	...	...	2	4	6
Pneumonia	2	...	...	...	...	...	10	3	...	...	12	3	15
Heart disease	...	...	3	...	...	...	7	...	...	...	10	....	10
Pernicious anaemia	...	...	...	1	...	...	...	1	...	...	....	2	2
Chlorosis	...	...	...	...	...	...	...	1	...	...	....	1	1
Septicaemia	...	...	...	...	...	...	...	1	...	...	....	1	1
Gastro-enteritis	...	...	...	...	...	...	1	...	...	...	1	....	1
Fracture of skull	...	...	...	1	2	...	4	1	...	...	6	2	8
Multiple fibromatosis	...	...	...	...	...	...	...	1	...	...	....	1	1
Carcinoma	...	...	...	...	3	...	...	...	...	...	3	....	3
Strangulated hernia	...	...	...	...	...	...	1	...	...	...	1	....	1
Pleurisy	...	...	1	...	...	...	...	1	...	...	1	1	2
Malingering	...	...	...	...	1	...	...	...	...	...	1	....	1
No diagnosis	...	...	...	...	...	...	...	...	...	...	25	16	41
Totals	438	205	749	478	670	609	195	99	16	10	2093	1417	3510

The number of admissions has increased steadily, and during the last year has averaged slightly more than one a day, so that the service may be regarded as active. The largest number under care was thirty-five on three different occasions, and the smallest, fifteen, the average being twenty-five. The average duration of treatment was twenty-three days, and the total number of days was 9,271.

The most striking result of the experience of Pavilion F has been the gradual assimilation with the general activities of the hospital. It has become well established as one of the units, and has become necessary to a satisfactory administration. The advantage of a special department for the care of persons whose ailments are complicated by mental symptoms has been amply shown, and a definite part of its work has been in the relief of other wards. During the year forty-six patients have been transferred from the general wards and from other hospitals in the city. Although the extent of this duty has exceeded anticipation, it may be taken as confirmation of the thesis upon which Pavilion F was founded, in effect that a sharp distinction cannot be drawn between mental and physical affections. The proposal to the county of Albany to erect this building was based upon this truth, and the argument that a less elaborate structure, containing a few rooms for brief detention of insane patients, was met with the contention that no plan which failed to provide full hospital care, would be acceptable. This assumption, as the years have passed, has had ample confirmation, and what at first appeared a dual purpose, in the design of providing for cases of insanity and cases of physical disease with mental complications, has proved effective in establishing the unity of both. It is true that the most urgent need was the correction of certain intolerable evils in the early management of cases of insanity. There were no resources for humane care, and the active demonstrations resulting from mental alienation were too often met by unavoidably severe measures. A retrospect of the change needs no spirit of optimism to describe it as most striking, and the routine which has gradually developed, has proved not only a source of relief to the patient, but of comfort to those who have had to deal with him. Their attitude is no longer one of defense and necessary aggression, for they may avail themselves of conditions of care agreeable to the patient.

Under the present system the nearest relative or other responsible person reports the case to the Commissioner of Charities of the city and makes a petition in writing, which is the preliminary step in the legal proceeding to determine: first, the presence of insanity; and, second, the need of commitment to an institution for the insane. In his magisterial capacity the commissioner assumes the custody of the patient, and directs his removal to the hospital. Two physicians, qualified examiners in lunacy, visit the patient in the hospital and inquire into his condition. If they determine that he is insane they so certify under oath, and their "certificate of insanity" is submitted to a judge of a court of record. A hearing is appointed, the patient is notified, and opportunity is given for his attendance. This constitutional right of the individual to be heard in any proceeding to deprive him of his liberty and independence is scrupulously observed by the court, and, indeed, technicalities are not infrequently waved aside, that any statement or opinion may be heard. If the resulting decision be that the individual is insane, incompetent to care for himself, or a menace to himself or others, and in such condition as to require custody or treatment, an order of commitment to an institution for the insane is issued. The patient then returns to the hospital to await transfer to the designated institution. In occasional instances numerous examinations are made by the physicians and several hearings have been held in court.

Every precaution is taken, the proceeding is orderly and deliberate, and the chance of error is reduced to a minimum. Under the conditions thus described one hundred thirteen patients have been received and transferred during the year. The sympathetic viewpoint of insanity as an affliction and not a crime, is shown in this increasing caution against hasty action. It is also represented in recent legislation, permitting "emergency admissions" to hospitals for the insane, that critical cases may receive temporary care for which these institutions are so well equipped, upon the request of two physicians. There is also statutory recognition of the admission of "voluntary" patients, which should be an increasing number under proper conditions.

As the feasibility of the treatment of mental disease in a general hospital has become more widely known during the thirteen years of operation of Pavilion F. there has followed a growing appreciation of the fact that abnormal conditions of the mind are not necessarily attended by loss of personal responsibility, or so complete defect of judgment as to render the victim unable to acquiesce in measures taken for his relief. In the popular view the term insanity is associated with an affliction of a permanent and hopeless character, and a distinction, sometimes crudely expressed, is drawn between this traditional conception and some vague nervous affection, in which the participation of the mind is incidental. This optimistic view, born of hope, is not only advanced by the friends of patients, but patients themselves are conscious of abnormal action and anxious to escape further ravages. Fear is a primitive emotion, standing ready to assert supremacy upon the slightest yielding of the will. The vague apprehension of mental exhaustion is easily translated into an imperative feeling of fear, which often assumes the form of dread of insanity. It is not always expressed by the patient, who avoids the confirmation which might arise from the suggestion; and yet many of his disordered actions arise from concentrated and ineffective effort at concealment. The result of the attempt emphasizes the inherent lack of coordination of thought and of self-control. At this point of evolution of the disease, a frank discussion of the symptoms and their import is beneficial. The patient is relieved to learn that the operations of the mind are distorted by unusual functioning of the brain, or that the physical agents of expression of thought are incapable of their office. He is reassured by the knowledge that fear of harm or suspicion of hostility on the part of his friends is a mistaken interpretation, and that the purely subjective disorder is susceptible of cure. Intelligent appreciation of his condition, sympathy with his distress, coming with an opportunity to place him under systematic treatment, and without formality, publicity or legal technicality, all contribute to his acquiescence in the suggestion that he enter the hospital. In many cases the restoration to health is relatively rapid, and the recovery of many patients in a comparatively short time, has been a surprising revelation of the effectiveness of an institution of this kind. The inference follows that a new clinical group has been discovered, or that light has been thrown upon the conditions of incipient cases. The literature of mental disease is largely established upon the observation and study of patients whose alienation has been of long standing, representing terminal stages, in which a greater or less degree of degeneration, or loss of mind, has occurred. It is customary to fix these conditions in a few groups or types, and a settled classification or terminology has followed.

The peculiar symptoms and groupings have been manifested in our patients, and yet lack the persistence and the orderly array. It may be assumed that in the temporary case there is some pathological activity of the brain, due to morbid or unusual chemical changes, and susceptible of readjustment; whereas, in permanent cases, the pathological process has resulted in structural changes, which must remain forever, or, are tending to greater and greater damage with final annihilation. And as the same organ, the brain, is affected, the only difference in the one case or the other, being one of degree, the expression of the disorder in abnormal thought and action is not essentially different. The outlook for the patient can be determined only after prolonged observation and after the tendency and progress of the disease has been ascertained.

As a result of this differentiation between mental disorder and insanity itself, there has grown a demand for more careful study of the incipient case, and particularly, for more active treatment to anticipate and prevent the development of a chronic defect. In the end the term insanity may become more limited in its significance, and may be used only in designation of persons whose incompetence has been determined by judicial process; and, on the part of the court, there is growing reluctance to pronounce this decision until all reasonable methods of purely medical character have failed to restore health. Too much emphasis cannot be laid upon this point. Disorder of the mind is disease, and, as such, should be recognized and treated by the physician and the most available resources at hand. This may be obtained by the consent and cooperation of the patient. It is not that he presents certain so-called "lucid intervals," but rather that the intrusion of vague and irregular lines of mental action are associated with processes of normal reasoning. The relative number of these patients is large, probably much larger than is generally believed. They desire and should receive without delay or formality such medical treatment as is indicated and such as would be without question accorded to any sufferer from any disease. It is very probable that the encouragement given to the treatment of these patients in the incipiency of their attack, such as has been made possible by this department of the hospital, will prove as effective in diminishing the vast number of cases of insanity, as any other available method of prevention. But this is only to be accomplished by the most liberal interpretation of their needs, and the absence of compulsion.

A second group of patients, whose needs are not unlike those just described, are unfortunately not susceptible to management of this kind, by reason of certain peculiarities of personality or from the presence of delusions. Not every man can be persuaded that his beliefs are erroneous, and interference with his prerogatives arouses antagonism or intensifies morbid suspicion. While we feel that treatment is needed, there arises a difference of opinion between the physician and the patient, and if his case be threatening, the disputed question can only be settled by the court. If the patient resists care or declines to remain in the hospital, there must be a judicial decision as to whether he shall remain at large or be deprived of his liberty. Such cases are not for the general hospital. An institution of this kind should not detain persons who have been declared insane. Its function is distinct and should not be confused with that of a special hospital, and the appearance of enforced custody should be avoided.

There remains a third group of patients, which includes those who are accepted as emergency cases, representing states of delirium or unconsciousness of other form. They are not voluntary patients, because volition is absent, but no question arises as to the propriety or humanity of administering prompt relief, and no criticism is offered by the patient after recovery which usually follows in a few days or a few weeks.

Discharges.

Of the three hundred and eighty-four patients discharged, fifty-three recovered and one hundred and forty-seven were improved. The percentage of cases distinctly benefited is fifty-two. Since the opening of the Pavilion the percentage of cases discharged as recovered and improved has been fifty-four. Of the thirty-five hundred and ten patients admitted in thirteen years, eighteen hundred and seventy patients have returned to their homes with health restored. One hundred and forty-four patients were discharged unimproved, and thirty-eight died. The causes of death were: exhaustion of alcoholism, one; tuberculosis, one; pneumonia, five; apoplexy, five; nephritis, two; meningitis, three; heart disease, ten; old age, three; suicide, one; appendicitis, one; cirrhosis of the liver, one; locomotor ataxia, one; multiple neuritis, one; exhaustion, three.

Acknowledgment.

The hospital is under repeated obligation to the officials of the city and county, and of neighboring counties, for their appreciative cooperation. In this particular department many delicate questions arise which can only be satisfactorily determined by cordial relations. The Hon. William H. Storrs was Commissioner of Charities of Albany when Pavilion F was opened in 1902, and was thus largely influential in determining the character of its work. During all these years he has been in active and sympathetic touch, and his promotion to higher official responsibility last winter left us with a sense of loss. The traditions and practice of his office, which he established upon a high plane of efficiency have been accepted by his successor, Hon. Alwin C. Quentel, to whom the hospital acknowledges a similar obligation.

The following gifts have been received during the year: Eighteen volumes of popular fiction from Mrs. Martin H. Glynn, fruit from St. Paul's church, flowers from Miss Haker, and subscription to *McClure's Magazine*, which has had the usual renewal by a " friend,' to all of whom thanks are given.

Editorial

> But the south wind continues and we are obliged to turn our back to the coast. There is much impatience on board. A—— was taken ill, and declared she had got the yellow fever. The doctor was sent for, who, very sick himself, and holding by the table to keep himself from falling, told her, without looking at her very particularly, that there was nothing the matter, only to keep yourself "*quite quiet and still;*" and the ship rolling at the same moment, he pitched headforemost out of the cabin, showing practically how much easier precept is than example.
>
> *Life in Mexico.* MADAME CALDERON DE LA BARCA.

✢ ✢ ✢

The Teaching of Psychiatry. There have appeared in the medical press from time to time complaints that the subject of mental diseases is ignored or receives too scant attention in the curricula of medical schools. That this criticism may be to some extent justified, there can be no denial, but that the defect in medical instruction has been limited to this subject is open to grave doubt. The era of practical demonstration in medicine is modern, and until the last few years, the domination of the so-called "didactic lecture" was all too evident. With the possible or partial exception of anatomy and surgery, the courses of a few years ago were made up of lectures. Perhaps the medical students of those days were a superior class; at any rate, the assumption seemed to be that listening to verbal elucidations, which often reached the high plane of oratory, qualified the auditor to practice medicine, the only reservation being that this absorption of knowledge should consume a given statutory number of months. Lectures on insanity were not infrequent in medical colleges years ago, and from these lectures have sprung some of the best of published treatises. Such was the origin of the classical works of Griesinger, Meynert, Savage, Blandford, and many others.

But if experience in the forum is of greater value to the orator, and has then proved of indirect benefit to the public, a higher degree of obligation is now imposed upon those who would instruct others. Locally, the evolution of the practical methods of instruction has reached its zenith in the radical reorganization of the Albany Medical College during the past year, and in clinical departments the hospitals are to be utilized as never before in acquainting the students with the aspects and treatment of disease. As for instruction in mental diseases, there is some satisfaction in a record of bedside study now entering upon its fourteenth year, and believed to be the first application in this country of this plan in this department of medicine. The past record of the College is nowise behind that of other schools, and the lectures upon medical jurisprudence, inaugurated with the first course in 1839, undoubtedly included some reference to the subject of insanity, though the incumbent of the chair, for over thirty years, Professor Amos Dean, was a lawyer. The first definite recognition in the College was in 1870 when Dr. Meredith Clymer, a well known practitioner of New York, accepted the professorship of "Diseases of the Nervous System, and of the Mind," and delivered courses of lectures. The plan was continued and the chair has been successively occupied by Dr. John P. Gray, superintendent of the Utica State Hospital, and his successor, Dr. G. Alder Blumer, and for temporary periods, by Drs. Carlos F. Macdonald and Walter Kempster. During the years 1887 to 1890 Dr. Henry Hun was "Professor of Diseases of the Nervous System and of Psychological Medicine," and his monograph upon mental diseases, which resulted from the lectures, was a most accurate synopsis of an intricate and extensive topic. Dr. Hun was able to demonstrate mental cases at the Alms House, and Dr. Gray and Dr. Blumer included visits by the students to the wards of the Utica State Hospital in their courses of instruction.

When Pavilion F was opened, in 1902, the opportunity to offer medical students personal observation of patients was taken, and since that time mental clinics have been held every week during the College session. It is understood that the time assigned for this study is limited, that a due proportion must be accepted and utilized in the relation between this work and the other demands of the curriculum into whose four years such a wide variety of subjects is crowded. The result is an allotment of about fourteen clinics for each student, and the subject of mental diseases must be so apportioned that the greatest amount of practical knowledge may be gained in this time. It is evident that theory must be subordinated, and that psychology as a topic must be reduced to the simplest fundamental terms. There is need of some understanding of mental faculties and of mental and nervous function, that the perversions of disease may be traced to their normal origin, but the analysis of symptoms and their import will engage the attention of the practitioner of medicine.

There are two advantages to the student in the present plan of instruction: he examines the patient personally; and he observes the changes or progress from week to week. On Monday afternoons at half-past two a limited number of the senior class report upon the ward, and find an assignment of patients, whom they examine for an hour. The section of the class meets an hour later, the reports are called for, the patient being present where his attendance may be had with propriety. The conclusions are discussed by the assembled class and instructor, and the resulting outline of pathology, diagnosis, prognosis and treatment is shaped for annotation by the class. Instruction of this kind should prove of greatest value, as reaching the sensorium of the student through the five special senses, whereas, knowledge from lectures uses the channel of hearing only. It would appear therefore that the advantage to the student of the observation method, as compared with the didactic method, is in the ratio of five to one.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.
ABSTRACT OF VITAL STATISTICS, SEPTEMBER, 1915.
COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

Deaths.

Consumption	15
Typhoid fever	1
Scarlet fever	0
Measles	0
Whooping cough	1
Diphtheria and croup	1
Grippe	1
Diarrheal diseases	17
Pneumonia	4
Broncho-pneumonia	2

Bright's disease	11
Apoplexy	8
Cancer	15
Accidents and violence	13
Deaths under one year	28
Deaths over seventy years	28
Total deaths	160
Death rate	17.70
Death rate less non-residents	14.71

Deaths in Institutions.

	Resident	Non-Resident
Albany Hospital	16	9
County House	0	6
Home of the Friendless	0	1
Homeopathic Hospital	2	8
Hospital for Incurables	1	1
House of Good Shepherd	0	1
Little Sisters of the Poor	1	2
Public Places	2	3
Sacred Heart Convent	0	1
St. Margaret's House	2	1
St. Peter's Hospital	0	11
Maternity Hospital	2	9
Albany Hospital Camp	1	3
Births	200	
Still births	7	

TUBERCULOSIS.

Bender Laboratory Report on Tuberculosis.

Living cases on record September 1, 1915		432
Cases reported:		
By card	22	
Dead cases by certificate	5	
		27
Total		459
Dead cases previously reported	10	
Dead cases not previously reported	5	
Removed	2	
		17
Living cases on record October 1, 1915		442

Total tuberculosis death certificates filed during September		15
Non-resident deaths:		
Albany Hospital Camp	1	
St. Margaret's House	1	
		2
Resident deaths		13

Report of Visiting Tuberculosis Nurse.

Old cases	5
New cases	20
Returned from hospitals	8
Total	33
Disposition of cases:	
Died	6
Sent to hospitals	5
To general tuberculosis nurse	20
Remaining under treatment	2
Total	33
Visits made	35
Visits made, old cases	210
Calls at Board of Health	28

Bureau of Communicable Disease.

Cases Reported.

Typhoid fever	9
Scarlet fever	6
Diphtheria and croup	8
Chickenpox	3
Measles	3
Whooping-cough	1
Tuberculosis	27
Dysentery	2
Total	59

Number of days quarantine for diphtheria:

Longest	19	Shortest	8	Average	13

Number of days quarantine for scarlet fever:

Longest	36	Shortest	31	Average	32 4/7

Fumigations:

Houses	40	Rooms	185

Milk bottles disinfected	39
Cases of diphtheria reported	8
Cases of diphtheria, antitoxin used	8
Deaths after use of antitoxin	1

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria

Initial positive	13
Initial negative	157
Release positive	2
Release negative	29
Total	201

Test of Sputum for Tuberculosis.

Positive	13
Negative	31

Widals.

Positive	7
Negative	29
Suspicious	3
Milk analyses	79
Wasserman reactions	3

BUREAU OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections	218
Old houses	82
New houses	136
Iron drains	72
Connection street sewers	20
Tile drains	21
Cellar drainers	0
Urinals	4
Cesspools	54
Wash basins	97
Sinks	78
Bath tubs	69
Washtrays	48
Tank closets	128
Slop hoppers	4
Permits issued	131
Plumbing	83
Building	48
Plans submitted	71
Old buildings	15
New buildings	56
Houses tested	63

Blue or red	5
Peppermint	3
Water test	55
Houses examined	55
Re-examined	42
Valid	25
Without cause	30

BUREAU OF MARKETS AND MILK.

Public market inspections	12
Market inspections	62
Fish market inspections	5
Fish peddler inspections	1
Packing house inspections	2
Rendering plant inspections	1
Milk depots inspected	12
Milk houses inspected	21
Dairies inspected	25
Dairies reinspected	17
Cows examined	96
Milk cans inspected	140
Milk cans condemned	7
Milk condemned, quarts	160
Lactometer readings	47
Temperature tests	47
Fat tests	88
Bacteria counts	82
Sediment tests	54
Horses examined for glanders	1
Ice cream establishments inspected	8
Complaints investigated	5

MISCELLANEOUS.

Work certificates issued to children	50
Vaccinations	160
Cases assigned to health physicians	45
Calls made by health physicians	75
Number of complaints of nuisances	81
Privy vaults	1
Closets	7
Plumbing	20
Other miscellaneous complaints	53
Number of dead animals removed	641

Medical News

Edited by Arthur J. Bedell, M. D.

Albany Guild for the Care of the Sick.—Department of Visiting Nursing.—Statistics for September, 1915.—Number of new cases, 167; classified as follows: Dispensary patients receiving home care, 14; district cases reported by health physicians, 1; charity cases reported by other physicians, 39; moderate income patients, 83; metropolitan patients, 30; old cases still under treatment, 608; total number of cases under nursing care during month, 775. Classification of diseases for the new cases: Medical, 32; surgical, 2; gynecological, 6; obstetrical under professional care, mothers 48, infants 46; eye and ear, 0; skin, 1; throat and nose, 2; dental, 0; infectious diseases in the medical list, 30; surgical list, 0. Disposition: Removed to hospitals, 18; deaths, 20; discharged cured, 128; improved, 30; unimproved, 3; number of patients still remaining under care, 576.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 2; students in attendance, 2; nurses in attendance, 5; patients carried over from last month, 1; new patients during month, 6; patients discharged, 4; visits by head obstetrician, 0; by attending obstetrician, 30; by students, 12; by nurses, 44; total number of visits for this department, 86.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 1,518; for professional supervision of convalescents, 601; total number of visits, 2,119; paid patients 1,069, charity patients 449, miscellaneous patients 601; cases reported to the Guild by 1 health physician, and 47 other physicians; graduate nurses 7, certified nurses 2, pupil nurses 6 on duty.

Dispensary Report.—Number of clinics held, 450; new patients, 122; old patients, 331; totaal number of patients treated during month, 453. Classification of clinics held: Surgical, 95; nose and throat, 0; eye and ear, 161; skin and genito-urinary, 49; medical, 52; lung, 32; dental, 0; nervous, 9; stomach, 2; children 42; gynecological, 8.

Medical Society of the County of Albany.—The semi-annual meeting of the Medical Society of the County of Albany was held at the Elks Club, 138 State Street, Tuesday, October 19th, at 8.45 p. m.

Dr. H. Judson Lipes, Major Medical Corps, Second Infantry, N. G. N. Y., read a paper on "The Medical Service in Campaign."

Medical Society of the County of Schenectady.—The regular monthly meeting of the Medical Society of the County of Schenectady was held in the rooms of the Society in the New County Building, Tuesday, October 19th, at 8.30 p. m.

Scientific program: "Impressions Gained at Society Meetings and Clinics Visited." Lester Betts, Albert Grussner, C. A. MacMinn, J. J. York, C. G. McMullen and E. MacD. Stanton. A discussion was held regarding the change in the staff of the Medical School Inspectors.

American College of Surgeons.—The Fourth Convocation of the American College of Surgeons was held at Symphony Hall, Boston, October 29th, at 8.00 p. m. The Fellowship address was given by President Edmund J. Jones of the University of Illinois.

Reprints Requested for the Library of the Surgeon-General's Office.—Lt.-Col. McCulloch, librarian of the Surgeon-General's office, writes that in order to make as complete a list as possible the bibliographies of American physicians in that library it is desired that all reprints and pamphlets not saleable in the general market should be deposited therein. Physicians will therefore confer a benefit by sending copies of all separate pamphlets and reprints of their authorship, or bound collection of the same, to the Librarian, Surgeon-General's Office, Army Medical Museum, Washington, D. C.

Fight against Vaccination.—The Anti-Compulsory Vaccination Society of Newark, N. J., has lost its fight against the exclusion of unvaccinated children from the schools, the State Board of Education having decided that children must be vaccinated before they can be admitted to the public schools. The society purposes taking the case to the courts in an appeal against this decision.

A New Cancer Prize.—The late Dr. Sigaut willed 8,000 francs to the Paris Academy of Medicine to be given as a prize for research work on cancer as the gastrointestinal tract.

Prevention of Infant Mortality.—The sixth annual meeting of the American Association for the Study and Prevention of Infant Mortality will be held in Philadelphia, November 12th to 15th. The subjects to be taken up at the meeting include the following: Eugenics, effect of the economic standing of the family on infant mortality; infant welfare nursing in small cities, towns and rural districts; institutional mortality; midwifery conditions and preventions of respiratory diseases. The topic of "Economic Aspects of Infant Welfare" will be discussed at a joint session with the Philadelphia County Medical Society at the Philadelphia College of Physicians. Other sessions will take place at the Bellevue-Stratford.

Clinical Congress of Surgeons.—The sixth annual session of the Clinical Congress of Surgeons of North America was held in Boston during the week of October 25th. The mornings and afternoons were devoted to clinics and four evening meetings were held.

Harvey Society Lectures.—The first lecture of the eleventh course of the Harvey Society was delivered at the New York Academy of Medicine, October 16th, at 8.30 p. m. Prof. C. W. Stiles of the Hygienic Laboratory, Washington, D. C., lectured on "Recent Studies of School Children with Special References to Hookworm Disease and Sanitation."

MEETING OF NEW YORK AND NEW ENGLAND RAILWAY SURGEONS.—The twenty-fifth annual meeting of the New York and New England Association of Railway Surgeons was held at the Hotel Astor, New York City, October 21st and 22d, under the presidency of Dr. William H. Marcy of Buffalo.

ANNUAL MEETING OF AMERICAN ROENTGENRAY SOCIETY.—At the annual meeting of the American Roentgenray Society, held at Atlantic City, September 22d to 25th, the following officers were elected: President, A. W. Crane, Kalamazoo, Mich.; vice-presidents, W. B. Bowman, Los Angeles, A. P. Gibbs, Columbia, S. C.; secretary, W. F. Manges, Philadelphia; treasurer, W. A. Evans, Detroit.

MEETING OF PELLAGRA ASSOCIATION.—The National Association for the Study of Pellagra held its third triennial meeting at Columbia, S. C., October 21 and 22, 1915.

MEETING ON PREVENTION OF BLINDNESS.—The first annual meeting of the National Committee for the Prevention of Blindness will be held in the Russell Sage Foundation Building, New York, November 4, 1915. Among the speakers who will be present are ex-President William H. Taft and Dr. George E. deSchweinitz, Philadelphia. The National Committee has a number of exhibits which are loaned to individuals or organizations desiring to promote the work of the prevention of blindness. The committee also distributes a large number of publications. In the year 1914-1915, about 100 blind children, victims of ophthalmia neonatorum, were sent to the various schools for the blind. The number of such children, however, is decreasing as shown by the figures of this society from 23.9 per cent for 1910-1911 to 15.1 per cent in 1914-1915.

EXAMINATION FOR MEDICAL CORPS OF THE NAVY.—The next examination for Medical Corps of the Navy will be held November 15, 1915, at Washington, D. C.; Boston, Mass.; New York City; Philadelphia, Pa.; Norfolk, Va.; Charleston, S. C.; Great Lakes (Chicago, Ill.); Mare Island, Cal.; and Puget Sound, Wash. Applicants must be citizens of the United States and must submit satisfactory evidence of preliminary education and medical education. The first stage of the examination is for appointment as assistant surgeon in the Medical Reserve Corps and embraces the following subjects: (a) anatomy, (b) physiology, (c) materia medica, (d) general medicine, (e) general surgery, (f) obstetrics. The successful candidate then attends a course of instruction at the Naval Medical School, during which course he receives a salary of $2,000 per annum, with allowances for quarters, heat and light and at the end of the course, if he successfully passes an examination in the subjects taught at the school, he is commissioned an assistant surgeon in the Navy. Full information in regard to the physical and professional examination may be obtained by addressing the Surgeon-General of the Navy, Navy Department, Washington, D. C.

Physical Examination of Food Handlers.—The Weekly Bulletin of the New York City Health Department says the examination of persons handling food has been begun in a limited way in the case of soda water fountain attendants and others engaged in similar employments who have voluntarily presented themselves for such examinations. The revised sanitary code requires all food handlers to submit to a physical examination when deemed necessary. A beginning has been made in the principal hotel district of New York City where the food inspectors of the department will enforce this section and require all cooks, waiters, and other food handlers in the hotels and restaurants to undergo examination at the Health Department's Occupational Clinic. In time it is hoped to extend this work to hotels and restaurants throughout the city.

A Real Medical Reserve Corps for the Navy.—Steps have been taken by the Navy Department to make the Medical Reserve Corps a reserve in fact for the Medical Corps of the Navy. Under the terms of a circular just issued by the department, medical reserve officers are required to bind themselves to perform active duty in the Navy whenever they are called upon by the secretary. Officers of the Medical Reserve Corps are also required to report to the Navy Department at least once in every six months as to their location and their physical fitness for military duty. Their number is limited to 300 and they are to be honorably discharged at the age of 55 years. In outlining the duties of the Medical Reserve Corps the circular says:

"When the President of the United States signs and confers a commission in the Naval Medical Reserve Corps he does so with the full realization that he is placing special trust and confidence in the ability and patriotism of the individual to whom the commission is issued, and, whether in peace or in war, this medical officer enjoys the prestige and standing that results from such recognition. Officers of this corps receive no financial return except when on active duty, and during time of peace, the number so assigned will necessarily be limited. But it is believed that love of country and pride in the possession of such a commission will influence the best among the medical profession to accept this honor and responsibility, whereby they may keep in close touch with the Navy Department and thus be prepared to serve their country in a national emergency. Every officer of the Medical Reserve Corps will, on appointment, be required to bind himself to be subject to the laws and regulations governing said corps and to perform active duty in the navy when called upon, at any time during a period of at least five years from date of appointment, during which period such officer will not be honorably discharged from the Medical Reserve Corps except for physical disability in the event that his services should no longer be required; this regulation, however, not to prevent any officer who desires to do so from submitting his resignation at any time. After five years from date of appointment, the resignation of any officer from the Medical Corps will, in the absence of special circumstances, be accepted when submitted. However, the acceptance of an officer's resignation is in all cases discretionary with the President."

EFFECTS OF SELECTION ON ALKALOIDS IN BELLADONNA.—Under the title "Some Effects on the Production of Alkaloids in Belladonna," the United States Department of Agriculture, in Bulletin 306, gives the results of a series of tests on controlling pollination of first and second generation plants with especial attention to cross-pollination and close-pollination. Following are the conclusions reached in the bulletin:

It having been established in the previous investigation that a wide range of variation exists in the alkaloidal content of belladonna plants, the present investigation was undertaken to determine whether the characteristic of alkaloid production is transmissible to the progeny through seed and whether the character is changed by vegetative propagation. The results thus far show that the first-generation plants secured from seed of cross-pollinated selected individuals display the characteristic of the maternal parent with regard to alkaloid productivity. This condition is generally true at all stages of growth during a season and also for at least two successive seasons. Close pollination of the parent plant has shown only a moderate influence on the transmission of this characteristic.

Second-generation plants from cross-pollination have been grown at Arlington, Va., Madison, Wis., and Timmonsville, S. C., and at all three stations they have displayed the relative alkaloid-producing tendencies evident in the original parent plant and the generation preceding.

While the plants at the different localities showed a parallel relationship toward each other, there was considerable difference in the general quantity of alkaloids produced. Thus, in the case of Madison and Arlington, where two pickings were made at fairly corresponding stages of growth, it was found that the Madison plants yielded more alkaloids than those at Arlington. At Timmonsville the yield was still greater than at Madison, but here only one picking was made, and it is hardly possible to make a true comparison. Nothing definite developed to indicate that a relationship exists between the amount of precipitation and sunshine and the percentage of alkaloids produced.

Plants were grown from cuttings, and at two stages of their growth these plants showed a marked tendency to display the same characteristic regarding alkaloid production as the plants from which they were propagated and the original parents of those plants.

PERSONALS.—Dr. WALTER L. HUGGINS (A. M. C. '99), has been appointed Clinical Professor in Surgery of the Medical Department of the University of Southern California.

—Dr. MAURICE J. MCGRATH (A. M. C. '11), is practicing at Oswego, N. Y.

DIED.—Dr. JAMES D. BRAGG (A. M. C. '67), died at his home in Bridgeport, Conn., July 23, 1915, from acute gastritis.

—Dr. CHARLES M. LEFLER (A. M. C. '70), died at his home in Gloversville, N. Y., October 6, 1915, after a long illness.

—Dr. FREDERICK F. BURTIS (A. M. C. '98), New York, a member of the Schenectady Medical Association and Surgeon on the S. S. *Advance* of the Panama Railroad and Steamship Company, died on board his vessel on September 6, 1915, aged 38 years.

—Dr. CHARLES K. FRAZIER (A. M. C. '73), died at his home in Cobleskill, N. Y., October 21, 1915.

In Memoriam

FREDERICK F. BURTIS, M. D.

Dr. FREDERICK F. BURTIS, who graduated from the Albany Medical College with the class of 1898, died at sea on the Steamer Advance of the Panama Railroad and Steamship Company, September 6, 1915.

Dr. Burtis was a native of Troy, and after graduation was appointed an interne at the Ellis Hospital, Schenectady. He remained in the Ellis Hospital for the service of one year, and then began practice in Schenectady where he was police physician, city physician and coroner's physician. In 1910 he moved to New York and was appointed surgeon of the Steamer Advance. Dr. Burtis never married, and there survives a brother and two sisters. He was a member of the University Club of New York.

NEW YORK STATE MEDICAL LIBRARY

Hours of opening. Each week day (Christmas, Thanksgiving and Fourth of July excepted) from 9 A. M. to 6 P. M. and on Tuesdays and Thursdays until 10 P. M. from October to May inclusive.

Loans. Books may be borrowed by any licensed physician in the State, by full-time instructors on the faculty of any medical college, members of the house staff of any hospital, registered and certified nurses, or any one engaged in medical work or pathological research who offers suitable references and credentials. The borrower shall pay return postage on books loaned outside of Albany, use such care in packing as to guard against injury in transportation, and pay for books lost or damaged.

Length of Loan. The period of loan is two weeks, for periodicals; four weeks for other works.

Physicians coming to the library for special research will find it to their advantage to notify the librarian in advance, as to the books or subjects desired and the date of the prospective visit.

PRINCIPAL ACCESSIONS FOR THE MONTH

Broadbent. Heart disease.
Bruce. Topographical atlas of the spinal cord.
Castellani & Chalmers. Manual of tropical medicine.
Keen. Animal experimentation and medical progress.
Manson. Tropical diseases.
March. Towards racial health.
Oppenheim. Text-book of nervous diseases. Tr. by Bruce. 2v.
Ritchie. Auricular flutter.
Rose & Carless. Manual of surgery.
Tubby. Deformities, including diseases of the bones and joints. 2v.
Nouvelle iconographie de la Salpêtrière. v. 1-20.

EXTRACTS FROM ANNUAL REPORT, 1 OCT. 1914-30 SEPT. 1915.

The Medical Library reports a year of increased activities along all lines, a growing clientele, and a gradual extension of the boundaries of its service throughout the State, not to be accurately estimated in figures. Books have been sent to physicians and institutions as far south as Long Island, west to Rochester and north to St. Lawrence and Clinton counties; and requests for bibliographies and information have been received from all corners of the State.

The war has retarded both growth and circulation to some extent, and lack of assistants has prevented additional hours of opening, but the library is coming to be relied upon by many physicians and students as well as by certain State departments, as a necessary adjunct, and is making every effort to prove itself indispensable to the medical profession of the State.

In September, 1914, notices were sent to the secretaries of neighboring medical societies stating that a room was at their disposal as had been promised when the building was constructed. From October to June, the Albany County Medical Society, the Homeopathic Medical Society of the County of Albany and the Monday Night Club, held six evening meetings in this room, several smaller conferences were held and many physicians used the room for private study, having access to reserved books there when the reading room was closed. In July, the Medical Library was deprived of this, the last of its six accessory rooms, to accommodate one of the Education Department offices. The loss of this room is not only a great detriment to the extension of the library's usefulness but cripples the library for convenient shelf space, and involved much extra labor in shifting and rearranging books to make room in the stacks for material formerly shelved in 221. The librarian also feels keenly the lack of an office such as the other section heads find indispensable for work which needs quiet attention away from the confusion of the public reading rooms.

EVENING USE.

As heretofore, the reading room has been open two evenings a week during the eight months' college term. The demand for evening privileges becoming more insistent each year, as attested not only by an increased attendance on open evenings but by the number of medical books called for at the main desk and the reserves requested for use in the general reading room when this one is closed.

Borrowers and Circulation.

One hundred and forty-one new borrowers have been added to the Medical Library list, thirty-three of them residing outside of Albany. One hundred and twenty of the total 433, are non-residents.

Two thousand one hundred and twenty-eight volumes have been circulated, an increase of 391 over last year.

In spite of augmented facilities which have called forth many favorable comments from readers, it has been necessary to borrow twenty-four times, from other libraries, at an average expense of about fifty-eight cents a volume to the borrowing physician though many of the packages contained a single number of a periodical which but for lack of funds should have been on our own shelves.

Accessions.

	Added.	Total in Library
Bound periodicals	2,071 vol.	12,500 vol.
Bound separates	251 "	6,960 "
Total........................	2,322 "	19,460 "

(Pamphlets and duplicates have not been counted.)

A special effort has been made to acquire works requested by the new faculty of the Albany Medical College and to complete periodical sets. The latter undertaking has been seriously handicapped by the interruption of transportation facilities by the war. In common with all libraries our current files have suffered from the suspension of many foreign journals. It has been estimated that at least 300 European medical periodicals have ceased publication and those which continue to be issued are often delayed in shipment.

The following periodical sets have been completed during the year:

American surgical association. Transactions.
Archiv für gynäkologie.
Archiv für klinische chirurgie.
Centralblott für röntgenstrahlen, radium, und verwandte gebiete.
Fortschritte der medizin.
Journal of medical research.
Journal of physiology.
Journal of the American medical association.
Monatsschrift für geburtskunde und frauenkrankheiten.
Zeitschrift für allgemeine physiologie. (Verworn.)
Zeitschrift für hygiene und infectionskrankheiten.

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ALBANY MEDICAL ANNALS

Original Communications

THE CONTROL OF CANCER.

Read before the Third District Branch of the Medical Society of the State of New York, at Hudson, on September 28th, 1915, at the request of the American Society for the Control of Cancer.

By RICHARD DERBY, M. D.

A perusal of the annual reports of the New York State Health Department brings to light the fact that for the three years 1911 to 1913, the cancer death rate per 100,000 of the population was 86.5 as compared with 43.0 for the three years 1887 to 1889. In other words during the past twenty-five years the death rate has increased in our State in the ratio of two to one. For every fifty individuals who died of cancer in New York State twenty-five years ago, one hundred are dying to-day. Of course improved medical knowledge, diagnosis, and certification may account for a large part of the recorded increase, but they cannot explain the fact that every year at least 8,000 persons in New York State, and 75,000 in the United States, die of this disease.

Whether cancer is really on the increase or our powers of perception have become more acute, are questions not worth considering alongside the fact that the death rate from cancer to-day is colossally large.

As a surgeon, I speak to you this afternoon on the control of cancer, and I feel that surgery has a right to talk upon this subject, for to-day the treatment of cancer through excision has so vastly more cures to its credit than any other method, that we may authoritatively say it is the only rational method of treatment, and that all others are purely supplementary, and must be considered so.

In spite of the fact that the cause of cancer still remains unknown, it seems to me that there are several genuine reasons for optimism over our progress in combatting this dread disease. In the first place there are many, many more well trained workers in the fields of medicine, biology, and chemistry, working upon the cause of cancer all over the world to-day than ever before. Secondly the reports from surgical clinics everywhere show a small, but steadily increasing percentage of cures. The third reason for optimism, and by far the most important one is, that earlier diagnoses are being made.

Gentlemen, if I can drive one point home this afternoon, let it be the plea for earlier diagnosis in cancer. It is the best weapon we have to combat the disease. It is the only weapon, of which I know, that will cut the mortality rate.

In order to make earlier diagnosis, the education of two persons must be undertaken—that of the doctor and of the layman. The education of both is necessary, and the education of both is difficult of accomplishment.

The education of the doctor must begin with the medical student. We must paint a new picture of the disease for his receptive mind. For when we have for long accustomed ourselves to mental pictures of disease, and our diagnostic parlance has been so oft repeated that it has taken on the nature of a formula, it is extremely difficult to break away from such time honored usages. The picture of the terminal stages of this disease, upon which we were all brought up, must be for all time destroyed. Our new conception of the disease must include a careful description of the favorite sites where cancer chooses to begin its ravages. Any superficial erosion or granulating area of the lip, the tongue, the mucous membrane of the mouth, the tonsil, or the larynx should at once suggest the possibility of cancer. All moles, warts or recurrent scabbing ulcerations of the skin should be looked upon with the gravest suspicion, as well as the slightest induration or tumefaction of the breast tissue. A history of persistent gastric or intestinal indigestion, or obstinate constipation, or blood stained vomitus, urine, stools, or vaginal discharge, these are the signs for which we must ever be alert, and which we must paint into our new twentieth century picture of cancer. Because of our lack of final knowledge on the subject it must needs be an impressionistic picture.

There is unquestionably present among practising physicians to-day a most astounding ignorance concerning cancer. As a proof of this fact one need only question the hopelessly advanced cases which one sees every day in the clinics of our big cities.

Dr. Gibson says, "that in a series of twenty-eight consecutive cases at the New York Hospital, questioned to obtain details of the advice or opinion received by these patients from the first doctor consulted, that fifty per cent of them, although often complaining of very significant symptoms, received no advice or treatment based on recognition or possibly even suspicion of their condition!" Among other examples he mentions a case of carcinoma of the stomach:

"Patient first consulted a physician about a year ago for gastric condition. Patient was told he had gastric indigestion and anaemia. Medicine was given which relieved the belching of gas. Two weeks and four weeks later the patient visited the same physician and was advised to take pepsin in milk or peptonized milk for his gastric condition. Iron was given for anaemia. Four months ago the patient again visited the same physician, and received a tonic and iron and arsenic which he took in milk after meals. Two weeks before admission again saw physician and was advised to increase the doses of iron. Three weeks before admission physician had gastric contents analysed and told patient he had hyperchlorhydria."

How are we going to prevent such members of our profession from undoing the good which we are trying to accomplish? I see no other way than by improving the standards of our medical schools, and educating the students of to-day and to-morrow to a much clearer knowledge of the insidious onset of cancer. Furthermore I would emphasize the importance of careful physical examination. There is no question that far more failures to recognize early cancer are due to carelessness than to ignorance. There is no longer, and I doubt if there ever was, a place in the profession for the man who makes his diagnosis from history alone. Cancer cannot be diagnosed, and far less suspected in its earliest stage, without a thorough physical examination.

And now to consider the education of the layman, a much more difficult task. Let me say that the American Society for the Control of Cancer, which I represent before you to-day, is doing a splendid and much needed work in this direction, as well as in the education of the professional man. By the mouths of its many speakers it is attempting to reach the ears of all classes of our population. Women's and men's clubs are being told in straightforward language what the danger signs of cancer are. The press is being carefully used as a medium to impart the same knowledge. In the big cities an immense amount of education is being spread through the social service workers connected with our big hospitals. These women visit the homes of the dispensary and hospital patients, and possessing their confidence as they do, are able to bring suspicious cases to observation or treatment. But by us of the profession, whose contact with our patients possesses by far the most natural means of education, must the great bulk of this work be carried out. If only we can break the superstition that cancer is incurable, we shall have accomplished much! For the secretiveness which is born of the knowledge of possessing an incurable disease, is a tremendous disadvantage against which to work. And this, I believe, can in great part be accomplished by the dissemination of the knowledge, that the early recognition of the disease practically insures a cure.

It is our solemn duty to warn the woman approaching the climacteric of the grave danger connected with this physiological stage of her life. Prolonged vaginal bleeding, at this period, is so commonly considered normal, that many cases of cervical or uterine cancer have acquired a long start, before the suspicion of the individual has been aroused. It would be well for all women to undergo examination at this period of their lives. By so doing many lives could be saved.

And now we turn to the treatment of cancer. Our methods must undergo a revision commensurate with our new picture of the disease. We must begin by attempting to anticipate the reality of cancer. All conditions which our experience has taught us predispose to cancer, must be watched with a suspicion and care which we have not known before. A great deal has been done but a great deal more can be done through the practice of prophylaxis. For example, we all know that an unhealed gastric ulcer or the scar of such an ulcer that has healed, in an individual of the proper age, is the frequent site of cancer of the stomach. Certainly the excision of such lesions, as a prophylactic measure, or their removal upon the very first manifestations of recurring gastric symptoms, would make the melancholy, too often seen picture of to-day of gastric carcinoma, a far less common one. I believe that our inability to handle cancer in any more conservative manner, justifies us in advocating such procedures. I feel very strongly that resort to exploratory laparotomy should no longer be considered a confession of diagnostic limitation on our part, but rather that this operation should be classified as one of our legitimate measures toward reaching a difficult diagnosis. Dr. Gibson says, " to none of us is given the faculty of making difficult diagnoses in all cases." Why not then admit our fallibility, and employ the means at hand for making diagnoses in time to save our patients' lives?

In my opinion, gentlemen, it is only through such methods as I have tried to describe to you, that the control of cancer can be brought about. Until we know more we must bend our combined efforts toward the early recognition of the disease.

" For in the early recognition of cancer lies the hope of cure."

1. Symposium of Cancer Surgery. C. L. Gibson. Not yet published. Read before the N. Y. County Medical Society, May 24, 1915.
2. Address on the Control of Cancer. F. T. Van Beuren. Read before the Medical Society of the County of Rockland, June, 1915.
3. Cancer as a Disease of Adult Life. Curtis E. Lakeman. Bulletin of N. Y. State Dept. of Health, May, 1915.

BLOOD COAGULATION IN INFANCY.

Read at the meeting of the Medical Society of the State of New York, Buffalo.

BY HENRY L. K. SHAW, M. D., AND FRANK J. WILLIAMS, M. D.,
Albany N. Y.

The clinical significance of the blood coagulation time in young children has not received from the pediatrician the attention it deserves. One reason for its neglect lies in the difficulties of technique and the wide divergence of results by different methods and observers. More reliance would be placed on the coagulation time, and its determination would become more a matter of routine examination, if a simple and reliable method were available. A number of methods have been employed by different observers depending on various principles and instruments. Addis, Dale and Laidlaw, McGowan, Rudolf, Sabraze' and Schultz, Vierordt and Wright, utilize the capillary tube. Brodie, Boggs, Pratt and Russell employ apparatus in which the corpuscles are set in motion by a current of air or oil directed against the drop of blood. Biffi, Brooks, Burkmaster and Goldhorn collect the blood on one or more wire loops. Burker, Riebe, Schwab, Slide and Straw determine the clotting time by the formation of fibrin. Bezancon, Duke, Hayam, Hinman, Giroman, Tabbe, Milian, Sladen and Solis-Sohen calculate the coagulation time by observing changes in the contour of the drop.

Carpenter and Gittings made a most exhaustive study of the coagulation phenomena as evidenced in children. They called attention to the many factors and sources of error which brought about a wide variance of results. Atmospheric conditions and viscosity of the blood are factors which cannot be controlled, but there are sources of error in technique which may be eliminated by practice and skill. These are, presence of dirt on the site of puncture or on the instrument, pressure on the tissues surrounding the puncture, size of puncture influencing rapidity and volume of flow, amount of blood withdrawn, length of time the blood remains in contact with the tissues, temperature at which the blood is allowed to coagulate, shape, diameter and depth of the drop under observation, and the end point adopted.

The wide variation in results is explained not alone by the different methods and principles but also by the personal equation which is a very large factor in a blood coagulation test. Thus, by one method, normal healthy blood will clot in 2½ minutes, while by another method the blood from the same person takes 34 minutes, yet by each method the coagulation time is normal. The same tests, taken by different observers, will vary in their results by several minutes. A discussion of all the theories that have been advanced to explain the phenomena of blood coagulation, is not within the limits of this paper. A short description of the work of three of the more recent investigators will give some idea of this important and complex problem.

Morawitz claims a substance, which he terms thrombokinase, is present in all of the body tissues and more particularly in the blood platelets. It is not found free in the circulating blood. Fibrinogen, prothrombin, antithrombin and calcium salts are present at all times in the normal blood stream. When there is an injury to the body tissues or to the formed elements of the blood, the thrombokinase will combine with the calcium salts and prothrombin and a new substance, called thrombin, is produced which unites instantly with fibrinogen to form fibrin or clot. Antithrombin receives its name from the power to prevent the formation of thrombin.

Howell differs from the conclusions of Morawitz by attaching more importance to the amount and activity of antithrombin. He believes that the sole function of the thrombokinase lies in its power to neutralize the antithrombin and thus permit the calcium salts and prothrombin to form thrombin. He agrees in the theory of the action of thrombin on the fibrinogen to form fibrin, and also on the source of thrombokinase in the tissues and blood platelets.

The latest theory is one advanced by Bordet and Delange which may be stated, briefly, as follows: The coagulation of normal blood consists essentially of three steps:—

1. Blood, on being shed, immediately undergoes some change which makes it different from the circulating blood and enables coagulation to ensue. Very little is known concerning this important initial step and its duration is unknown although it is probably very short.

2. The second step is the formation of thrombin. The duration of this stage can be measured and is probably the varying factor in the length of time required for coagulation. According to Bordet and Delange, thrombin is formed by the reaction between cytozyme and serozyme in the presence of a soluble calcium salt. The cytozyme is derived chiefly from the platelets and to less extent from the leucocytes. It is also found in the tissue juices. This cytozyme is comparable to the thrombokinase of Morawitz and Howell. Serozyme is a substance contained in the blood serum which unites with the cytozyme to form thrombin. Serozyme is comparable to the prothrombin of Morawitz and of Howell.

3. The third step is the action of the thrombin on the fibrinogen changing it into fibrin which is the clot. The calcium salts are not required for this stage. The duration of this stage is probably within two minutes.

Clinical methods to be practical should have simple and inexpensive apparatus, easy and rapid technic and show constant and accurate results. The writers employed two methods depending on different principles which seemed to meet these requirements. The apparatus designed by Boggs, a modification of the Brodie-Russell method, is recommended for hospital and office practice where a microscope is available. The method of Dale and Laidlaw requires neither expensive apparatus nor a microscope and can be applied at the patient's bedside in the home. The essential part of the apparatus is a small capillary glass tube containing a small lead shot. The size of the tubing, as suggested by Dale and Laidlaw, is 2 cm. in length and from 1.3 to 1.4 mm. in diameter. In our investigations in infants we used capillary tubes of a much smaller diameter but of the same length, thereby diminishing the amount of blood necessary for each test. The smallest size of shot obtainable, called dust shot, was found to be of suitable size for the very small diameter of tubing used. The tubes are very easily prepared. They are first cut the desired length and one end is narrowed in a gas flame just enough to prevent the shot from passing through. After the shot has been introduced the other end is similarly narrowed so that the shot can roll the whole length of the tube but cannot fall out at either end. The lumen of these tubes can be standardized by the use of small needle. A new capillary tube with its contained shot is taken for each determination. The test is made as follows:

A finger or toe is carefully cleansed and pricked. The first drop of blood is wiped away, but as soon as the second drop appears a stop watch is started. A capillary tube, inclined upward, is brought into contact with the drop of blood and as soon as it is filled it is placed in a spring clip, the jaws of which are coated with clean plasticine or vaseline. The clip with the tube is then immersed in a water bath which is kept at a temperature of from 35° to 40° C. The clip is turned gently so that the shot runs slowly up and down the tube. The shot is clearly visible in a good light. The shot will travel through the fluid as the tube is tilted until the increase in viscosity causes its speed to diminish and it will come to an abrupt stop when the tube is held in a vertical position. This is the point of coagulation and the watch is stopped and the reading taken. Dale and Laidlaw and others have found the coagulation time in healthy adults by this method to vary between 1 and 39 seconds and 1 minute 51 seconds.

We made examinations in 108 healthy infants under two years of age by this method and found the determinations were between 1 minute 15 seconds and 1 minute 48 seconds, and the average coagulation time was 1 minute 30 seconds which is a slightly shorter time than in adults.

The coagulometer of Russell and Brodie, as modified by Boggs and described by Emerson, consists of a moist chamber with a glass bottom which can be placed upon the stage of the microscope. The upper surface is a truncated cone of glass projecting downward into the moist chamber. The lower surface is 4 mm. in diameter and on it is placed the drop of blood which should just cover the surface. This is then fitted into the moist chamber. A small tube projects through the side of the chamber and by means of a rubber bulb a gentle stream of air can be directed against the blood. Under low power the blood cells can be observed during the agitation. The corpuscles will move freely and independently of one another at first and a little later will begin to clump at the periphery. As the process of coagulation continues, the masses of corpuscles will no longer move in the drop but the drop changes its shape, the corpuscles showing first an elastic concentric motion and finally an elastic radial motion moving toward the center and then springing quickly back to their original position when the current of air ceases. This is taken as the end point. Sladen and Emerson found the average coagulation time in healthy adults to be 5 minutes 6 seconds. Our results with this instrument gave a much lower average in infants, as follows:

	Range	*Average*
95 Exam. in infants under 1 year of age	—3′ 20″—4′ 42″	3′ 47″
35 Exam. in infants between 1 and 2 years of age	—3′ 20″—4′ 45″	3′ 54″
20 Exam. in infants between 2 and 3 years of age	—3′ 24″—4′ 45″	3′ 58″

In our tests we observed no difference in the clotting time before and after eating, nor at different periods of the day. There was no difference in blood taken from various parts of the body—ears, fingers or toes. We found that the first drop clotted somewhat more quickly than succeeding ones and a slight hastening of the coagulation time was noted when the tissues surrounding the needle prick were squeezed and manipulated to force out the blood.

With the Boggs instrument we could find no appreciable difference in the clotting time whether the glass surface was warmed or cooled before applying the blood. The most important factor is the volume of the blood. A deep, full drop requires several minutes longer to reach the end point than when a shallow drop is employed. Care must be taken to use the same size drop in order to obtain trustworthy comparable results.

Pediatric literature and text-books make little or no reference to the coagulation time in childhood as compared with adult life, and the authors who happen to refer to this point state that there is practically no difference. The only article on this subject is the one by Carpenter and Gittings which we have already made reference to and quotations from. These authors made only 39 examinations in healthy children from birth to 15 years and found by the method they employed (Biffi-Brooks coagulometer) a range from 5 to 14 minutes. Where such a wide range exists in health very little significance can be attached to variations occurring in individual conditions and diseases.

Our results by both the Dale-Laidlaw and Russell-Brodie methods were remarkably constant and we believe we have established a normal coagulation time for infants and hope in a later communication to compare these results with those obtained in various disease conditions.

Clinical and Pathological Notes

Report of a Case of Aberrant Thyroid. By Edwin L. Draper, M. D.

Read before the Medical Society of the County of Albany, April 22, 1915.

History. A woman 41 years old, married and the mother of one child sixteen years old, was referred to me complaining of a gradual swelling or enlargement of her abdomen. Her previous history including an operation for mastoid disease a year and a half previous was unimportant.

About eight weeks before the patient was seen she first noticed that her abdomen was larger than it had been. She had completely ceased to menstruate a year previously. The abdomen continued to slowly enlarge and if she was on her feet much she experienced discomfort, sometimes amounting to pain in the small of the back. She had a continual sensation of weight in abdomen. She had been constipated for years, but this trouble had not been accentuated. Had had no difficulty or increased frequency in emptying bladder. Appetite was good. Slept fairly well, for years having been a rather light sleeper. Had recently been rather short of breath upon exertion.

Examination. There was a slight facial paralysis which had persisted since her mastoid operation. Heart negative. Lungs negative. The abdomen was symmetrically enlarged to such an extent that umbilicus was nearly obliterated. With patient on back both flanks were flat to percussion, with a tympanitic area 12 x 14 cm. in diameter in region of umbilicus, which shifted with change of position. Distinct fluid wave was present. Further than this the abdominal examination was negative because of the large amount of fluid present.

Vaginal examination showed a bilateral tear of the cervix with a movable uterus. It was impossible to determine the size of the uterus. On the right side there was a distinct sense of resistance to the finger. Nothing could be felt on the left side.

Blood pressure showed no abnormal variations and the urine examination was negative.

The diagnosis was not clear but having ruled out the heart and kidneys the patient was advised to enter the hospital for an exploratory incision with the probability of finding some pathologic condition in the right side of the pelvis, which advice was accepted.

A median incision was made below the umbilicus. Upon opening the peritoneum a large amount of clear serous fluid escaped. The peritoneum was normal in appearance. The liver was normal to palpation. In the pelvis upon the right side was a mass situated within the broad ligament the size of a grape fruit. There were numerous adhesions between this mass and the peritoneum covering the intestines. These adhesions were broken up and the mass removed. At the upper, inner and anterior corner of this mass were two small walnut sized masses closely connected with but protruding from the large mass. These small masses were composed of a dark, dusky red, succulent looking tissue. There was a small cyst of the left ovary which was removed. The appendix was removed as a side issue.

Convalescence was uneventful. There has never been any return of the ascites and the patient's recovery has apparently been permanent, three and a half years having elapsed since operation.

The cyst removed from the left ovary proved to be a simple cyst upon pathological investigation. The large mass from the right side of the pelvis was a dermoid cyst which contained the usual hair and sebaceous material with a few hard calcareous tooth like masses. The two walnut sized masses referred to as protruding from the wall of the large tumor proved upon microscopic examination to be perfectly typical thyroid tissue of the colloid type. There was microscopically no evidence of malignancy.

Neoplasms of the pelvis containing tissue histologically resembling thyroid tissue are by no means unknown. They occur however but rarely. In a resumé of the literature of the subject Outerbridge (1) collected forty-six cases. The first case was reported in 1899 by Gottschalk. The last case in this series was reported in 1913. So that it appears that less than fifty such cases have been reported since they were first recognized fifteen years ago. I have found an additional case reported in 1914 (2).

There are two principal points of interest in considering tumors of this type; their etiology and their clinical significance. It is unnecessary here to attempt to reproduce the discussion of their origin. Some authors have maintained that the thyroid tissue when at some distance from the neck was metastatic from the neck, claiming that it was possible to have metastatic growths from a non-malignant thyroid (3). This does not seem to be accepted by others. The most generally accepted theory seems to be that these tumors must be considered as teratomata and hence of congenital origin (4).

The question of malignancy of tumors of this type is probably of more interest to the clinician than a discussion as to their origin.

Somewhere between ten per cent and twenty per cent of these tumors appear to be malignant. According to Falco the solid tertomata containing thyroid tissue are apt to be malignant while the cystic tumors containing thyroid tissue are generally benign (2). The presence of ascites is not indicative of the presence or absence of malignancy.

Since these tumors have no symptomatology of their own a pre-operative diagnosis is of course impossible.

The rarity with which tumors of this type are found, I think, is sufficient reason for reporting them, although they are interesting only from a purely academic point of view.

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2. FALCO. *Ann. di Ost. e Gin.* (Abstract in *American Journal of Obstetrics*, May 1914, page 1043.)
3. DE NANCREDE. *Physician and Surgeon*, Vol. 35, 1913, page 19.
4. LEXOR-BEVAN. *General Surgery*, page 982.

Editorial

> "You are clever at your work, Dom Claude, and Hippocrates offers no more difficulty to you than a nut does to a monkey! Medicine a dream! The herbalists and masters of the profession would hardly be restrained from throwing a stone or two at you were they here. And so you deny the influence of drugs on the blood, and of unguents on the body! You deny the eternal pharmacy of flowers and metals—the world, in short, which has been prepared expressly for that eternal malady we call man!"
>
> "I deny neither the pharmacy nor the malady," said Dom Claude calmly. "I deny the doctor."
>
> "It is not true then," continued Coictier, his anger rising, "that gout is an internal eruption, that a gun wound may be cured by applying a roasted mouse, that age may be rejuvenated by the careful infusion of young blood; it is not true that two and two make four, and that emprostathonos succeeds to opistathonos?"
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> *Notre Dame de Paris.* VICTOR HUGO.

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The Teaching of Medicine. Those entrusted with the teaching of medicine should aim to combine not only the good in the methods used abroad, in England, Germany and France, but also to utilize the experience derived from medical teaching in the United States. A careful study of the past history of the Albany Medical College may enable us to advance its standing by comparison with the methods developed in medical teaching in the best schools in this country. In America, medicine was for years taught in proprietary schools largely by groups of busy practicing physicians who formed the faculty. After the development of laboratory work, however, in the so-called scientific branches of medicine it was obviously necessary to secure men trained in laboratory methods in anatomy, histology, embryology, physiology, biological chemistry and pathology. The large amount of time necessary to devote to such teaching required full-time, well-trained men. These subjects were thus placed upon an academic basis and as only well endowed colleges and universities could provide adequate facilities and men for such work it naturally followed that the best medical schools became, in certain instances, affiliated with and, ultimately an integral part of the universities. Until quite recently, however, teaching in the clinical branches has, with few exceptions, lagged far behind. Hospital positions which controlled "clinical material" have often been occupied by physicians without connection with a medical school or experience in teaching. Under certain conditions it has been necessary to give recognition to attending physicians and surgeons who have had control of the clinical material in order to open the hospital wards to medical students. This custom is now in process of change and the better schools, in late years have had control of the hospitals, and representation on their staffs that the adequate facilities for work of academic standard in the so-called laboratory years might be duplicated in the clinical courses which are none the less important in the training of young men who are to assume the obligations and responsibilities of practice.

In 1905 a committee of the American Medical Association set forth certain standards for adoption in the immediate future and suggested more advanced standards to provide for evolutional improvements with regard to admission requirements, and full-time teachers in the laboratory departments. The importance of these recommendations was at once recognized and they have now been adopted in many medical schools. This year a committee of the same association published a preliminary report on the "re-organization of clinical teaching." This was published in the *Journal of the American Medical Association,* November 6, 1915. The program set forth will be a revelation to the trustees of most hospitals and it would surprise many to know that in some of the best schools already a similar plan is actually in force. Hospital trustees are now realizing the advantages to their institutions to be secured by association with a medical school. It has resulted in the securing for such hospitals of trained men for the attending and house staffs to enable the hospital to progress in a systematic manner instead of apparently standing still. Not only is such an association valuable for the training of medical students as future members of the house and attending staffs but also in securing a broader training in the school for the hospital nurses.

In England, the medical schools originated in the hospitals. Students have free access to the bedside, assist in the examination and care of the patients. This excellent phase of the English system is being introduced in the hospitals associated with the Albany Medical College. Cases are assigned to the students or "assistants" as they are called, in rotation. Each is required to take complete history and make a thorough physical examination and do the necessary laboratory work on each of his cases. This is facilitated by a working laboratory in close proximity to the wards. The student follows his case from day to day and reports each morning to the house physician or head of the service. All observations and examinations are systematically recorded and, after verification, form an integral part of the hospital records. Such records are not only of value to the hospital and community for subsequent analysis in advancing knowledge of clinical medicine regarding diagnosis, prognosis and treatment, but are of the utmost importance in training the future physicians in the method of careful, thorough, and systematic routine examination.

The English school, on the other hand, is less strong in the laboratory branches, which have been most highly developed in Germany, where teachers in both the laboratory and clinical departments are selected on the basis of scientific eminence. Mr. Flexner, who has recently investigated the English side of medical education, highly commends the clinical teaching in the medical schools of England and emphasizes the fact that the German system is still weak in the fact that didactic lectures are too largely utilized and the student loses the practical benefit by failure to allow him to use the knowledge obtained in the laboratory departments in the first-hand study and treatment of patients.

In America, it is evident that the best medical schools have adopted the good of both the German and English systems. It would appear that even more benefit might be derived if certain customs were adopted from the French hospitals where the clinical staff who have cared for the patients not only take active part in general routine or special clinical laboratory examinations but more particularly in cases of unusual interest even make the post mortem examination and work out the case completely from the bacteriological, histological and chemical standpoints associating themselves, when necessary, or advisable with workers in the special laboratory departments.

The basis of modern clinical teaching is that the student, thoroughly grounded in laboratory branches, should have personal contact with the patient by serving as clinical assistant, and should record in an orderly and systematic manner, his observation regarding the history, physical and laboratory examinations of the patient. The didactic clinical lectures may be still utilized to a limited extent to indicate the lines of outside reading and show the importance of special subjects as well as to discuss certain phases in the field of medicine which might be otherwise neglected. The most valuable of the clinical exercises in the amphitheatre which has been made good use of at the Albany Medical College for many years is in assigning students to work up unknown cases and present them before the class subject to criticism and comment of the other members of the class and teaching staff.

The problem and case method of teaching medicine may also be employed to great advantage to correlate and co-ordinate the medical knowledge gained from various sources. Such exercises force the student to take the active instead of the receptive attitude. In this way they learn to weigh and balance the evidence for and against possible diagnoses and to enter into active discussion of the minute details of the case including the treatment of the patient. The clinical section work above described which retains certain of the good features of the old preceptor system is of the utmost importance. Students in this way have immediate responsibility under close supervision for the patient and study the progress of the case from day to day. Thus, the opportunity is afforded them of having personal practical experience in the natural history of disease which is of the utmost importance in prognosis and in accurately estimating the true value of therapeutic procedures.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.
ABSTRACT OF VITAL STATISTICS, OCTOBER, 1915.
COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

Deaths.

Consumption	20
Typhoid fever	3
Scarlet fever	0
Measles	0
Whooping cough	1
Diphtheria and croup	0
Grippe	0
Diarrheal diseases	2
Pneumonia	7
Broncho-pneumonia	5
Bright's disease	16
Apoplexy	9
Cancer	9
Accidents and violence	6
Deaths under one year	13
Deaths over seventy years	18
Total deaths	159
Death rate	17.01
Death rate less non-residents	14.77

Deaths in Institutions.	Resident.	Non-Resident.
Maternity Hospital	1	2
Albany County Hospital	0	1
Albany County Penitentiary	1	0
Child's Hospital	0	1
Federation Camp	0	1

Public places	1	3
St. Margaret's House	0	4
Hospital for Incurables	1	1
Little Sisters of the Poor	1	1
Home for the Friendless	1	0
St. Peter's Hospital	1	9
Albany Hospital	11	13
Albany Hospital Camp	1	3
Homeopathic Hospital	4	9
Totals	23	48

Births	185
Still births	14

TUBERCULOSIS.

Bender Laboratory Report on Tuberculosis.

Living cases on record October 1, 1915		442
Cases reported:		
By card	18	
Dead cases by certificate	9	
		27
Total		469
Dead cases previously reported	11	
Dead cases not previously reported	9	
		20
Living cases on record November 1, 1915		449

Total tuberculosis death certificates filed during October		20
Non-resident deaths:		
County Hospital	1	
County Jail	1	
Maternity Hospital	1	
		3
Resident deaths		17

Report of Visiting Tuberculosis Nurse.

Old cases	2
New cases	17
Returned from hospitals	10
Total	29

Disposition of cases:

Died	2
Sent to hospitals	6
To general tuberculosis nurse	16
Remaining under treatment	5
Total	29
Visits made	34
Visits made, old cases	250
Calls at Board of Health office	27

BUREAU OF COMMUNICABLE DISEASE.

Cases Reported.

Typhoid fever	2
Scarlet fever	4
Diphtheria and croup	19
Chickenpox	19
Measles	8
Whooping-cough	14
Tuberculosis	27
Puerperal septicaemia	1
Total	94

Number of days quarantine for diphtheria:

Longest...... 26 Shortest...... 5 Average...... 14 4/7

Number of days quarantine for scarlet fever:

Longest...... 35 Shortest...... 31 Average...... 34

Fumigations:

Houses.................. 32 Rooms.................. 205

Milk bottles disinfected	34
Cases of diphtheria reported	19
Cases of diphtheria, antitoxin used	10
Deaths after use of antitoxin	1

Communicable Disease in Relation to Schools.

	Reported		
	D.	S.F.	M.
Public School No. 14	....	....	2
Public School No. 17	1	....	....
Public School No. 21	....	1	....
Cathedral School	1	....	....
St. Ann's School	....	....	1

BUREAU OF PATHOLOGY.

Bender Laboratory Report on Diphtheria.

Initial positive	21
Initial negative	229
Release positive	9
Release negative	76
Suspicious	2
Total	337

Test of Sputum for Tuberculosis.

Positive	18
Negative	26

Widal Tests.

Positive	3
Negative	26
Suspicious	3
Milk analyses	12
Wasserman reactions	1

BUREAU OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections	264
Old houses	80
New houses	184
Iron drains	100
Connection street sewers	62
Tile drains	63
Latrines	2
Cesspools	81
Wash basins	96
Sinks	86
Bath tubs	72
Washtrays	57
Tank closets	114
Drinking fountains	3
Slop hoppers	3
Shower baths	4
Permits issued	143
Plumbing	101
Building	42
Plans submitted	67
Old buildings	14
New buildings	53
Houses tested	62
Blue or red	4
Peppermint	1
Water tests	57
Houses examined	32
Re-examined	69
Valid	9
Without cause	23

BUREAU OF MARKETS AND MILK.

Public market inspections	18
Market inspections	108
Fish markets	10

Fish peddlers	5
Packing house inspections	3
Rendering plant inspections	3
Slaughter house inspections	3
Hide house inspections	3
Milk depots inspected	12
Milk houses inspected	104
Dairies inspected	104
Milk cans inspected	525
Milk cans unclean	19
Milk condemned, quarts	200
Milk cans condemned	6
Lactometer readings	27
Temperature tests	27
Fat tests	42
Sediment tests	128
Chemical tests	16
Bacteria counts	54
Cows examined	1,507
Cows removed	7
Cows quarantined	5
Salmon condemned, cans	240

MISCELLANEOUS

Work certificates issued to children	34
Vaccinations	69
Cases assigned to health physicians	73
Calls made by health physicians	144
Number of complaints of nuisances	71
Privy vaults	13
Closets	5
Plumbing	11
Other miscellaneous complaints	42
Number of dead animals removed	672

Medical News

Edited by Arthur J. Bedell, M. D.

ALBANY GUILD FOR THE CARE OF THE SICK.—DEPARTMENT OF VISITING NURSING.—STATISTICS FOR OCTOBER, 1915.—Number of new cases, 192; classified as follows: Dispensary patients receiving home care, 30; district cases reported by health physicians, 2; charity cases reported by other physicians, 43; moderate income patients, 96; metropolitan patients, 21; old cases still under treatment, 576; total number of cases under nursing care during month, 768. Classification of diseases for the new cases: Medical, 34; surgical, 3; gynecological, 7; obstetrical under professional care, mothers 51, infants 49; eye and ear, 0; skin, 0; throat and nose, 0; dental, 0; infectious diseases in the medical list, 48; infectious diseases in the surgical list, 0. Disposition: Removed to hospitals, 15; deaths, 22; discharged cured, 107; improved, 62; unimproved, 1; number of patients still remaining under care, 561.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 2; students in attendance, 4; nurses in attendance, 6; patients carried over from last month, 3; new patients during month, 6; patients discharged, 7; visits by head obstetrician, 1; by attending obstetrician, 33; by students, 25; by nurses, 58; total number of visits for this department, 117.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 1,625; for professional supervision of convalescents, 708; total number of visits, 2,333; paid patients 999, charity patients 626, unrecorded patients 708; cases reported to the Guild by 2 health physicians, and 47 other physicians; graduate nurses 8, certified nurses 2, pupil nurses 7 on duty.

Dispensary Report.—Number of clinics held, 86; new patients, 286; old patients, 332; total number of patients treated during month, 618. Classification of clinics held: Surgical, 13; nose and throat, 0; eye and ear, 15; skin and genito-urinary, 7; medical, 13; lung, 9; dental, 0; nervous, 3; stomach, 5; children, 12; gynecological, 9.

Albany Guild for the Care of the Sick.—Department of Visiting Nursing.—Statistics for June to September, inclusive, 1915.—Number of new cases, 878; classified as follows: Dispensary patients receiving home care, 80; district cases reported by health physicians, 10; charity cases reported by other physicians, 360; moderate income patients, 310; metropolitan patients, 118; old cases still under treatment, 520; total number of cases under nursing care during months, 1,398. Classification of diseases for the new cases: Medical, 134; surgical, 24; gynecological, 14; obstetrical under professional care, mothers 180, infants 175; eye and ear, 7; skin, 2; throat and nose, 6; dental, 0; infectious diseases in the medical list, 336; in the surgical list, 0. Disposition: Removed to hospitals, 93; deaths, 88; discharged cured, 453; improved, 174; unimproved, 14; number of patients still remaining under care, 576.

Special Obstetrical Department.—Number of obstetricians in charge of cases, 3; students in attendance, 8; nurses in attendance, 8; patients carried over from last month, 3; new patients during months, 30; patients discharged, 27; visits by head obstetrician, 0; by attending obstetrician, 97; by students, 135; by nurses, 258; total number of visits for this department, 490.

Visits of Guild Nurses (all departments).—Number of visits with nursing treatment, 6,339; for professional supervision of convalescents, 2,509; total number of visits, 8,848; cases reported to the Guild by 6 health physicians, and 100 other physicians; graduate nurses 7, certified nurses 2, pupil nurses 6 on duty.

Dispensary Report.—Number of clinics held, 669; new patients, 612; old patients, 1,320; total number of patients treated during months, 1,932. Classification of clinics held: Surgical, 130; nose and throat, 6; eye and ear, 197; skin and genito-urinary, 66; medical, 84; lung, 47; dental, 0; nervous, 20; stomach, 10; children, 77; gynecological, 32.

Medical Society of the County of Schenectady.—The regular monthly meeting of the Medical Society of the County of Schenectady was held in the rooms of the Society in the New County Building, Tuesday evening, November 9, 1915, at 8.30 P. M.

Scientific program: X-ray Symposium; 1. Errors of Interpretation in X-ray work, Dr. C. A. MacMinn; 2. The X-ray in the Diagnosis of Lung Diseases, Dr. C. B. Witter; 3. Some Problems in the X-ray Diagnosis of Urinary calculi, Dr. C. W. Woodall. Discussion was opened by Dr. Albert Lenz.

Public Health Course, Albany Medical College.—The Albany Medical College announces the following lectures to be delivered during the month of November.

November 3d, Theodore Horton, C. E., Director of Division of Sanitary Engineering, New York State Department of Health. Subject, "Water Supplies," and also on November 10th, subject "Sewage Disposal."

November 17th, C. T. Graham-Rogers, M. D., Director of Division of Industrial Child Hygiene, New York State Department of Labor. Subject, "Industrial Hygiene and Prevention of Occupational Diseases."

November 24th, George E. Willcomb, Chemist, Bureau of Water, Albany. Subject, "Water, Conditions Affecting its Quality and Control."

The American Society for the Study of Alcohol and Other Narcotics will hold its forty-fifth annual meeting at Washington, D. C., December 15 and 16, 1915.

This was the first society of medical men in the world to take up the scientific study of alcohol and other narcotics. Its papers and transactions have been published in the *Journal of Inebriety,* and comprise the first scientific literature on this subject.

Thirty-one papers will be read at this meeting by specialists and distinguished medical and scientific men. These presentations will be confined exclusively to the effects of alcohol and drugs on the body and brain, based on laboratory observations and clinical experience.

The public are cordially invited to be present. Programmes can be had by addressing the Secretary, Dr. T. D. Crothers, Hartford, Conn.

Warrant Against Substitute Specifics.—The United States Department of Agriculture has issued a warrant against spurious medicines. A sample labeled "Neosalvarsan" which was recently examined by the Department was found to be nothing more than colored with a coal tar dye, none of the genuine neosalvarsan whatever being present. The label on this product was an exact reproduction of the genuine imported neosalvarsan, or it was an original container refilled with the imitation article. This fraud is held to be particularly flagrant, according to the medical experts of the Department, not alone because a worthless preparation is sold for a high price but mainly because neosalvarsan is usually administered by injection directly into the blood of the syphilitic patient. The cheap substitute is not only worthless in the treatment of this disease but when injected directly into the blood might work considerable injury. Another preparation is peddled to druggists and is purported to be acetylsalicylic acid, aspirin of foreign origin regularly prescribed by many physicians for certain ailments, have been seized by the official in charge of the enforcement of the Food and Drugs Act. An analysis showed the products to be worthless.

RAILWAY SURGEONS MEET.—At the annual meeting of the American Association of Railway Surgeons held in Chicago, October 12th to 15th, the following officers were elected: President, Dr. Frank T. Fort, Louisville, Ky.; vice-presidents, Drs. John M. Dodd, Ashland, Wis., Edward H. Griswold, Peru, Ind., and Charles P. Frantz, Burlington, Iowa. Assistant Surgeon-General William Colby Rucker, U. S. P. H. S., read a paper before the Association on "Intent and Purpose of the Interstate Quarantine Regulation."

AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTO-LARYNGOLOGY.—The annual meeting of the American Academy of Ophthalmology and Oto-Laryngology was held in Chicago, October 4 to 10, 1915.

CONFERENCE OF MEDICAL INSPECTORS.—The annual fall conference of the New York State Association of Medical Inspectors and Physical Educators was held November 23, 1915, at Rochester, meeting as the Section on Hygiene and Physical Education of the New York State Teachers' Association. Dr. Clinton P. McCord of Albany was chairman of the section. The morning session took up the subjects of attainment of correct posture; the physical aspects of school hygiene; defective vision among school children; military training in public schools; hygiene of school buildings and some aspects of nutrition of school children. The afternoon program consisted of an informal round-table discussion of the various aspects of physical training and school hygiene.

SECOND ANNUAL NORTH ATLANTIC STATES' TUBERCULOSIS CONFERENCE.—The Second North Atlantic States' Tuberculosis Conference, meeting in conjunction with the annual Conference of the New York State Charities Aid Association, was held in the State Education Building, Albany, N. Y., November 4th and 5th. There were three general sessions, including a mass meeting and ten sectional meetings. Hospital, visiting nurse, dispensary and Red Cross Seal problems were the topic of discussion. Among the speakers were Governor Charles S. Whitman, Dr. Alfred Meyer, Dr. Lawrason Brown, Dr. H. R. M. Landis, Dr. A. H. Garvin, Dr. Charles J. Hatfield, Dr. Haven Emerson, Dr. John B. Andrews, Dr. Herman M. Biggs, Mr. Homer Folks, and Mr. George F. Canfield.

SIXTEENTH NEW YORK STATE CONFERENCE OF CHARITIES AND CORRECTION.—The sixteenth New York State Conference of Charities and Correction was held in the State Education Building, Albany, November 16 and 18, 1915.

THE JOURNAL OF CUTANEOUS DISEASES.—Beginning with the January, 1916, number, the *Journal of Cutaneous Diseases,* including Syphilis, will be published for the American Dermatological Association by W. M. Leonard of Boston. Each number will contain 80 pages and as far as possible will be of interest and value to the general practitioner as well as to the dermatologist.

UNITED STATES CIVIL SERVICE EXAMINATION.—ASSISTANT IN METABOLISM INVESTIGATIONS (MALE), $1,500.—The United States Civil Service Commission announces an open competitive examination for assistant in metabolism investigations, for men only, on December 8, 1915, at the places mentioned in the list printed hereon. From the register of eligibles resulting from this examination certification will be made to fill vacancies in this position in the United States Public Health Service for duty in the field at a salary of $1,500 a year, and vacancies as they may occur in positions requiring similar qualifications, unless it is found to be in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

The duties of this position will be to make complete food analyses, including calorimetric determinations. Appointees will also be required to use the respiration apparatus for the determination of the energy metabolism.

Competitors will be examined in the following subjects, which will have the relative weights indicated:

Subjects.	*Weights.*
1. General chemistry	25
2. Calorimetric respiration determinations	40
3. Education and experience	35
Total	100

Graduation from a four years' course at a college, university, or medical school of recognized standing and at least six months' practical experience in work with the respiration apparatus and the calorimeter are prerequisites for consideration for this position.

Statements as to education and experience are accepted subject to verification.

Applicants must not have reached their forty-fifth birthday on the date of the examination.

Applicants must submit to the examiner on the day of the examination their photographs, taken within two years, securely pasted in the space provided on the admission cards sent them after their applications are filed. Tintypes or proofs will not be accepted.

This examination is open to all men who are citizens of the United States and who meet the requirements.

Persons who meet the requirements and desire this examination should at once apply for Form 1312, stating the title of the examination for which the form is desired, to the United States Civil Service Commission, Washington, D. C., or to the Secretary of the United States Civil Service Board at any place mentioned in the list printed hereon. Applications should be properly executed, excluding the medical and county officer's certificates, and filed with the Commission at Washington in time to arrange for the examination at the place selected by the applicant. The exact title of the examination as given at the head of this announcement should be stated in the application form.

MEDICAL CORPS, UNITED STATES ARMY.—A candidate for appointment in the Medical Corps of the Navy must be a citizen of the United States, between 21 and 30 years of age, a graduate of a reputable school of medicine, and must apply for permission to appear before a Board of Medical Examiners. The application *must be in the handwriting of the applicant,* and must be accompanied by the following certificates:

(*a*) Letters or certificates from *two* or more persons of good repute, testifying from personal knowledge to good habits and moral character.

(*b*) A certificate to the effect that the applicant is a *citizen of the United States.*

(*c*) Certificate of preliminary education: The candidate must submit a certificate of graduation from an accepted high school or an acceptable equivalent.

(*d*) Certificate of medical education: This certificate should give the name of the school and the date of graduation.

(*e*) If the candidate has had hospital service or special educational or professional advantages, certificates to this effect, signed by the proper authorities, should also be forwarded.

The applicant will save unnecessary correspondence if he will make sure when submitting his application that the qualifications enumerated above are clearly and plainly described in his letters or certificates.

The Examination.—Preliminary (Prior to Appointment in the Reserve Corps).—When a candidate presents himself for examination he must bring with him the testimonials as to character and professional fitness, diplomas, and certificate that he is a citizen of the United States, those forwarded with his application having been returned to him for this purpose.

Physical Examination.—The physical examination is thorough and the candidate is required to certify, on oath, that he is free from all mental, physical, and constitutional defects.

Acuteness of vision, 12/20 for each eye, unaided by glasses, but capable of correction by aid of lenses to 20/20, is obligatory. Color perception must be normal and the teeth good.

If the candidate is found to be physically disqualified, his examination is concluded; if found to be physically qualified, his examination is continued as follows:

Professional Examination.—1. Letter to the Board, giving a brief statement of the candidate's general and professional education.

2. Written examination in (*a*) anatomy, (*b*) physiology, (*c*) materia medica and therapeutics, (*d*) general medicine, (*e*) general surgery, and (*f*) obstetrics.

The professional part of the preliminary examination will be conducted by local or supervisory boards, but marks will be assigned by a central board of not less than three medical officers, which will convene at the Naval Medical School, Washington, D. C. Applicants who attain a general average of not less than 80 per cent in the preliminary examinations, and are deemed otherwise acceptable will receive an appointment in the Medical Reserve Corps. The applicants will be selected for assignment in attendance upon the course of instruction at the Naval Medical School in the order of merit as determined at the preliminary professional examination.

The Board will give careful consideration to composition and spelling as shown in the papers submitted in the written examination, and to the statements contained in the letters and certificates regarding the candidate's preliminary and professional education.

No allowances will be made for the expenses of persons appearing for the preliminary examination.

Final (*Naval Medical School*).—Professional Examination.—The final examination will be on the subjects embraced in the course of instruction, such as naval and general hygiene, naval and operative surgery, tropical medicine and pathology, medical zoology, practical chemistry, bacteriology and serology, ophthalmology, Naval Regulations, Hospital Corps drills, and duties of the medical officer afloat and ashore.

Student officers who attain a general average of at least 80 per cent will receive certificates of graduation from the school.

Members of each class, upon graduating from the Naval Medical School, will be commissioned in the order of merit as determined upon final examination, but not in excess of the number of vacancies in the Medical Corps.

Since no officer can be commissioned in the Medical Corps who is over 30 years of age, permits will not be issued to applicants who can not complete the prescribed course at the Naval Medical School while within the age limit.

During the course of instruction the character, habits, and general deportment of student officers are closely observed. If it appears during a candidate's attendance at the school that his appointment in the Medical Corps would be undesirable, he will be relieved from active duty and his discharge from the service recommended.

Physical Examination.—The final physical examination is thorough in character. No person will receive an appointment whose physical condition may indicate the possibility of early retirement for disability.

The Boards are required, under oath, to report on the physical, mental, moral, and professional qualifications of the candidates.

A successful candidate upon completion of his final examination will be notified of the result by the President of the Board.

A candidate failing in the preliminary examination may apply for a re-examination, but such re-examination will not be granted until after a period of six months has elapsed since the last examination.

No candidate will be given the course at the Naval Medical School more than once.

A candidate who is appointed in the Reserve Corps before the course of instruction begins may be assigned to active duty at some naval station, with full pay and allowances, pending his detail to the Naval Medical School, should such services be necessary.

PERSONALS.—Dr. WILLIAM O. STILLMAN (A. M. C. '78), has been re-elected president of the American Humane Society.

— Dr. DARWIN A. BRUCE (A. M. C. '13), has opened an office at 235 Livingston Ave., Albany.

In Memoriam

ALMA E. BEALE, M. D.

Dr. ALMA E. BEALE died at the Samaritan Hospital in Troy on August 31, 1915. Dr. Beale was born in Schaghticoke, N. Y., on August 7, 1861. She completed her high school course in 1885 and continued her schooling at Dana Hall Seminary. In 1887 she entered Wellesley College and graduated in 1891. The following four years were spent in teaching in Naugatuck, Conn. Her medical education began at Johns Hopkins University, where she, was graduated in 1900. For a year after graduating she served as externe in the Out-patient Department of the Hospital and in the evenings worked in the Dispensary for Working Women and Girls. The year of 1901-2 she was interne in the New York Infirmary for Women and Children.

Owing to the illness and subsequent death of her father she returned to Schaghticoke and took over his practice. She served as Health Officer from 1902 to 1912. Because of ill health she traveled abroad during the summer of 1912 and on her return in the fall went to Baltimore to serve as physician to the Children's Aid Society. In October, 1913, she began Settlement Work in New York City, a work for which she considered herself especially fitted; but because of failing health was compelled to give it up and returned to Schaghticoke.

Among her own townspeople her best work was done. She was respected and beloved by them not only for her medical ability but also for her loyal devotion to those under her care. Her loss will be felt keenly and her memory will be cherished by all who knew her.

H. W. Carey.

Charles K. Frazier, M. D.

After a few days' illness with pneumonia, Dr. C. K. Frazier died at his home in Cobleskill, N. Y., Thursday, October 21, 1915.

Dr. Frazier was the son of Dr. David and Susanah (Jenkins) Frazier and was born in Cobleskill, October 17, 1850. His father graduated from the Albany Medical College in 1847, and lived and practiced at Cobleskill, where he died in 1894. He was educated in the public schools and the Albany Academy and studied medicine with Dr. Armsby, graduating from the Albany Medical College in 1873, thus making him the oldest practicing physician in Cobleskill at the time of his death. For the first two years after receiving his diploma he practiced medicine in Waverly and afterward at Big Flats, Chemung County, near Elmira.

He was an ardent Democrat from the time he was old enough to vote, and became active in various campaigns, attending conventions and caucuses.

He received the appointment of coroner to fill an unexpired term from his friend of early days, Gov. David B. Hill, and was twice chosen by the electors for that office. Dr. Frazier married Miss Rosalie L. Camp of Campville, Tioga County, in 1874, and removed to Cobleskill in 1878. Dr. Frazier was kind hearted and generous, and was never known to refuse to go to homes where the physician's fee might be lacking.

In February, 1913, he suffered a severe attack of heart trouble which he thought would prove fatal. At that time he prepared a paper setting forth his creed and with it were two of his favorite poems, "The Chemistry of Character," a poem published in "Poems of Progress" in 1871, and Tennyson's "Crossing the Bar." These were found among his effects in an envelope marked, "If I die suddenly, follow within directions." He wished to have "Crossing the Bar" sung at his funeral and the paper read by "some good reader."

Dr. Frazier is survived by two sisters, Mrs. Julius Spoore and Mrs. Frances Muller, a grandson, George F. Muller of New York, and an adopted daughter, Mrs. M. D. Pace of Roanoke, Va.

Current Medical Literature

REVIEWS AND NOTICES OF BOOKS

The Care of the Baby. By J. P. Crozer Griffith, M. D., Professor of Diseases of Children in the University of Pennsylvania. Sixth Edition Thoroughly Revised. 12mo of 463 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, $1.50 net.

This book is veritably an old friend with a new face, and the fact that there have been six editions and fifteen reprints since the first edition was published in 1895, furnishes very definite and concrete proof of its popularity. The typography has been entirely changed and is much more pleasing to the eye. On several occasions a review of this book has appeared in the *Annals.*

We would like to emphasize the importance of medical practitioners reading the chapter on breast-feeding which is filled with practical and helpful suggestions. The author, in our opinion, makes a mistake by urging the mother to examine her own breast milk by means of a cremometer.

One notes that Dr. Griffith is not an advocate of supplementary or complementary feeding of breast babies. In the description of the proprietary foods no mention is made of the dried milk powders which are being more widely used in this country and very extensively in both England and France. Neither is the subject of certified milk touched upon and the question of clean and safe milk is scarcely discussed. The importance of having pure and clean milk, and the proper care of it after being received in the home, should be given more attention in a book of this character which is primarily designed to educate the mother in the care and feeding of her baby.

The author still clings to the same feeding intervals described in the first edition of this book twenty years ago and waits until the baby is three months old before giving a three-hour interval. He also advocates a three-hour interval until the end of the first year. In the diet lists for infants from one year to eighteen months of age, he advocates cereal,—oatmeal and grits, etc., and on the following page insists that these cereals should be cooked for three or four hours. This would be rather discouraging if the mother had to rise at 2 or 3 A. M. and cook the baby's breakfast! This criticism, however, can be applied to many diet lists which advocate the cereal as a first feeding with young infants.

Every parent should read carefully and consider well the advice on the discipline of the child, and the fathers could derive a good deal of profit by a perusal of this book. H. L. K. S.

Fewer and Better Babies or the Limitation of Offspring by the Prevention of Conception. By WILLIAM J. ROBINSON, M. D., Chief of the Department Genito-Urinary Diseases and Dermatology, Bronx Hospital and Dispensary. Cloth. Pp. 245. New York: The Critic and Guide Co., 1915.

There is perhaps no one in this country who is better qualified to discuss candidly this important question than the author of this book, for he has lectured and debated, has contributed to medical and lay journals, published books and pamphlets and has devoted his life to "propaganda of the voluntary limitation of offspring by prevention of undesirable conception." He has the courage of his convictions and in each chapter are set forth arguments which are unanswerable and should convince every sane, honest and unprejudiced reader.

Dr. A. Jacobi, whom we all revere, has written an able and characteristic introduction in which he strongly advocates national birth-regulation and believes that "both our Federal and state laws on the subject of prevention are grievously wrong and unjust."

Some of our greatest philosophers, jurists and divines have openly accepted the doctrine of Malthus, that unchecked, human fertility causes the population to catch up with the food supply, thereby increasing the cost of living and leading to poverty, famine, disease and war.

The greatest need of this and any other nation is not more babies but better babies, for it is not the babies born that count but the number of babies who enter life equipped with strength and vitality sufficient to enable them to develop into strong and healthy men and women. A careful study of the vital statistics of the civilized world proves without exception that a high birth rate is accompanied by a high infant mortality rate.

There is no question but that the highest birth rate is among the least desirable classes, namely, the indigent, uneducated, unsuccessful, and the mentally and physically inferior. The laws of heredity are fixed and inexorable—like begets like, and the "stream of life is no purer than its source." The small family system or neomalthusism has been adopted by the educated classes, so why not instruct the poor and unlearned in the methods of prevention of conception, and make it possible that every child born shall be welcomed and loved in anticipation?

Dr. James P. Warbasse, who contributes a chapter in this book, says: "Were the unconceived child to speak perhaps it might say, 'Let me be created in love and born only as a gift to parents whose hands are held out with loving welcome to receive me. Spare me from the hostile frown of my creators.' A babe is so important a thing that it is deserving only of loving parents; and parents and lovers are so important that to mar their union by an unwelcome child is to threaten both parenthood and sexual love."

Our state laws which forbid any remedial discussion on this subject are the result of morbid sentimentalism and should be amended. This book will aid greatly in opening the eyes of those who have been blinded by ignorance and tradition. H. L. K. S.

The Starvation Treatment of Diabetes. With a Series of Graduated Diet as Used at the Massachusetts General Hospital. By LEWIS WEBB HILL, M. D., and RENA S. ECKMAN (dietitian). With an introduction by RICHARD C. CABOT, M. D. Pages 72. Boston, Mass.: W. M. Leonard, 1915.

The first five pages of this little book are devoted to a detailed description of the Allen starvation treatment of diabetes. After entrance to the hospital, the patient is kept on ordinary diet for forty-eight hours so that his tolerance for carbohydrates may be determined. He is then put to bed and starved until the urine is sugar free. This usually requires from one to two days, occasionally longer. During the starvation period only whisky, black coffee and water are given. The amount of water need not be restricted. Of whisky one ounce every two hours is given in coffee from 7:00 A. M. until 7:00 P. M. This furnishes about 800 calories. The weight of the patient and the sugar content of the urine is carefully studied daily. Three and a half pages are devoted to special directions for urine examination. The rest of the book contains tables of food values and graded diet lists for use after the starvation period and for general use after the patient leaves the hospital. The essential points brought out by Allen's treatment are that it is not dangerous, but beneficial, to starve the diabetic; that it is not desirable for all diabetics to hold their weight. Some cases do much better if reduced ten, fifteen or even twenty pounds. After starvation the diet must be raised very slowly to prevent recurrence of glycosuria. An excess of protein must be regarded as producing glycosuria and the protein intake must, therefore, be restricted much more than has been the custom in the treatment of diabetics. This small book describes the details of the modern treatment of diabetes very briefly and clearly and the tables and diet lists will be extremely helpful to practitioners who wish to take advantage of this method of treatment. T. O.

A Manual of Surgery for Students and Physicians. By FRANCIS T. STEWART, M. D., Professor of Clinical Surgery, Jefferson Medical College; Surgeon to the Germantown Hospital; Out-Patient Surgeon to the Pennsylvania Hospital. Fourth edition with 580 illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street.

This is a volume of 726 pages, and of necessity represents the field of general surgery condensed and abbreviated to the utmost degree.

The present edition includes the newer diagnostic aids and more recent methods of operative technic but the entire book is so abridged that one is tempted to question the value of publishing a single volume surgery of this size.

As in many works of this character, the text is often somewhat hazy and indistinct. Thus, in the treatment of shock, the author mentions in part of a single sentence, the names of eight different drugs with their individual dosage. For the most part, however, the language is clear, although inclined to be terse, and somewhat blunt.

In the preface to this edition, the author states that "a number of the old illustrations have been discarded, a number of new ones inserted." Certain of the former, appearing in previous editions might have been altogether dispensed with, as they are of too diagrammatic a type to be found within the pages of a fresh edition.

As a handy reference volume the book is well worth consulting, but its physical limitations restrict it to a very narrow field insofar as the science and art of surgery are concerned. J. L. BENDELL.

Fractures and Dislocations, Diagnosis and Treatment. By MILLER E. PRESTON, A. B., M. D., 1st Lieut. M. R. C., U. S. A.; Surgical Examiner, Colorado State Board of Medical Examiners; formerly Police Surgeon, City and County of Denver; Instructor in Anatomy, University of Denver, and Visiting Gynecologist to City and County Hospital, Denver Colorado. With a chapter on Röntgenology by H. G. STOVER, M. D., professor of Rôntgenology, School of Medicine, University of Colorado; Member of American Röntgen Ray Society; Visiting Röntgenologist to City and County Hospital, St. Joseph's Hospital, and Children's Hospital, Denver, Colorado. 860 illustrations. St. Louis. C. V. Mosby Co., 1915.

The practice of surgery has become so specialized within the past few years that monographs and volumes treating of special aspects of surgery seem to be the order of the day. The growing importance of fractures and dislocations as a surgical specialty is emphasized by the number of articles dealing with the subject in the current medical literature of to-day as compared with that of ten years ago.

This volume of 792 pages is a book well worth the attention of those interested in the subject of fractures and dislocations. It is somewhat unique in several respects, containing as it does chapters on special and allied subjects not usually found in volumes of this kind. Thus the author states at the opening of a chapter entitled Scalp Wounds that "wounding of the scalp is such a frequent and important complication of fracture of the skull, that the management of these wounds is best considered before entering upon the subject of injury to the skull and brain."

Fracture-dislocations of the spine is likewise treated at length in a special chapter.

Among the other special subjects are included a chapter on "Terms and Definitions," the "Use of the X-Ray" and "Bone Transplantation."

The book contains over 800 photographs, all of them splendid reproductions, consisting for the most part of clinical examples of fracture and dislocation cases, and radiographic plates.

The book is decidedly practical in character and well written. It is a distinct addition to surgical literature and well worth perusal on the part of those who practice along the lines of general surgery.

J. L. BENDELL.

NEW YORK STATE MEDICAL LIBRARY.

Edited by Frances K. Ray.

Hours of Opening.—Each week day (Christmas, Thanksgiving and Fourth of July excepted) from 9 A. M. to 6 P. M. and on Tuesdays and Thursdays until 10 P. M. from October to May inclusive.

Loans.—Books may be borrowed by any licensed physician in the State, by full-time instructors on the faculty of any medical college, members of the house staff of any hospital, registered and certified nurses, or any one engaged in medical work or pathological research who offers suitable references and credentials. The borrower shall pay return postage on books loaned outside of Albany, use such care in packing as to guard against injury in transportation, and pay for books lost or damaged.

Length of Loan.—The period of loan is two weeks for periodicals; four weeks for other works.

Physicians coming to the library for special research will find it to their advantage to notify the librarian in advance as to the books or subjects desired and the date of the prospective visit.

Library of Surgeon-General's Office, U. S. A.—Physicians wishing books from this National Medical Library may obtain them for two weeks through this Library by paying express charges both ways.

Gifts.—Gifts of books, periodicals or reprints are earnestly solicited. Even single volumes or odd numbers of periodicals of little value to the owner may help to complete valuable sets.

The library contains 19,460 bound volumes in addition to several thousand pamphlets and unbound periodicals, and receives currently about 500 serials.

The Tuberculosis Conference held in this building the first week in November brought many visitors to the library and added several names of physicians and nurses to the Borrowers' list. The National Association for the Study and Prevention of Tuberculosis presented the Library with a set of its pamphlet publications and is sending its Transactions and Bulletins currently.

ACCESSIONS OF THE MONTH

Cabot, R. C. Guide to the Clinical Examination of the Blood. Ed. 5, 1914.

Brehl and Marchand. Handbuch der allgemeinen Pathologie Bd. 3, abt. 1, 1915.

Guy's Hospital Reports, v. 68, 1914.

Brünings and Albrecht. Direkte Endoskopie der Luft- und Speisewege, 1915. (Neue deutsche Chirurgie Bd. 16.)

Hun, Henry. Medical pamphlets, 1884-1914.

NEW CURRENT PERIODICALS

Archives de Médecine des Enfants.

Der Kinderärzt.

Bulletin of the National Association for the Study and Prevention of Tuberculosis.

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Albany Medical College

JANUARY, 1915

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2.—Sputum should be sent in clean wide-mouth bottles; the ordinary vaseline bottle answers all purposes. The same bottle is suitable for faeces. Urine should be in clean bottles containing not less than six ounces.

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6.—Haematological examinations at the patient's home will be made by appointment.

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